



**Ouachita Fertilizer Company**



# **MSDS and PRODUCT DATA SHEETS**

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Ouachita Fertilizer Company  
P O Box 4540  
Monroe, Louisiana 71211

(318) 388-0400

11/7/2003

## UAN

### UREA AMMONIUM NITRATE SOLUTION (UAN)

32% N

Composition / Information on ingredients

Component Name	Weight %	CAS Number
Ammonium Nitrate	43-48	6484-52-2
Urea	33-36	57-13-6
Water	19-20	7732-18-5

### Typical Physical Properties

Specific Gravity	1.326
Boiling Point	>100°C (>212°F)
Salt Out Temperature	29°F (-2°C)
Lbs./gal @ 60 F	11.04
Lbs. Of N/gal @ 60 F	3.5328
pH	7.0-7.5
Vapor Pressure @60°F	0.06 psia
Physical State	Liquid
Appearance	Clear Liquid
Odor	Little or no detectable ammonia odor

# Material Safety Data Sheet

## Ouachita Fertilizer Company

P O Box 4540  
 Monroe, Louisiana 71211  
 318-388-0400

Product Name: **Uan (Nitrogen Fertilizer Solution)**

Emergencies (800) 424-9300 (CHEMTREC)  
 Health Emergencies, Contact Your Local Poison Center

Urea Ammonium                      CO(NH<sub>2</sub>)<sub>2</sub>                      Nitrogen Fertilizer  
 Common Name: Nitrate Solution      Formula: NH<sub>4</sub>NO<sub>3</sub>                      Synonym: Solution

**Section II - Composition/Information On Ingredients**

CHEMICAL NAME(S)	CAS No.	Exposure Limits						% by Weight
		OSHA PEL		TLV - TWA		STEL CEIL		
		mg/rn <sup>3</sup>	ppm	mg/rn <sup>3</sup>	ppm	mg/rn <sup>3</sup>	ppm	
Total Nitrogen	Uan							27.8-32.2
Ammonium Nitrate	6484-52-2							<b>37.1-47.3</b>
Urea 57-1	3-6							29.0-36.8
Water								20.1 -30.0

None Established by OSHA. No TLV (Threshold Limit Value) established by ACGIH for Urea Ammonium Nitrate Solution.

**Section III - Hazard Identification**

Potential Acute May cause irritation

Health Effects:

Eyes and Skin:      Eyes: Liquid contact may irritate slightly. If mist is formed, mild irritation may result. Skin: Prolonged or repeated liquid contact may irritate slightly.

Inhalation:            in the unlikely event that mist is formed, this would irritate respiratory tract.

Ingestion: Ingestion may cause blood disorders (Methemoglobinemia) in infants. (This means loss of efficiency in the red blood cells and is evidenced by blue skin.) Apart from this, symptoms may include excessive action of the kidneys

Potential Chronic

Health Effects:      See ingestion by infants, above

Carcinogenicity Lists:      IARC Monograph:      No      NTP:      No      OSHA:      No

**Section IV - First Aid Measures**

Eyes:                      Immediately flush with water, continuing for at least 15 minutes. If irritation persists, get prompt medical attention.

Skin:                      Immediately flush thoroughly with water. If irritation persists, get prompt medical attention.

Ingestion:              If conscious, immediately give two (2) to four (4) glasses of water, and induce vomiting by touching finger to back of throat, get prompt medical attention.

Inhalation:              Remove to fresh air.

**Section V - Fire Fighting Measures**

Flash Point:              None      Autoignition Temperature:      Not Applicable

Lower Explosive Limit:      Not Applicable      Upper Explosive Limit:      Not Applicable

Unusual Fire and      See problem with heating in pipes and other confined spaces, Section VII, Handling.

Explosion Hazards:

Extinguishing Media: Water

Special Firefighting

Procedures and      Wear self-contained breathing apparatus approved by NIOSH. Use Water spray to keep containers cool.

Equipment:

**Section VI Accidental Release Measures**

Small Spill: Contain and mop up or pump spilled material into metal or plastic drums as soon as possible. Material is a fertilizer.

Large Spill: Contain and mop up or pump spilled material into metal or plastic drums as soon as possible.

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: Unless heated, sprayed or agitated to produce mist, natural ventilation should be adequate.

Handling: Avoid breathing mist. Minimize contact with eyes, skin and clothing. Do not evaporate in enclosed spaces. Avoid *welding on pipes or tanks which have contained Uan solution until they have been thoroughly washed out with water.* Residual Ammonium Nitrate may explode under conditions of confinement and high temperature. Avoid containers, piping, or fittings made of brass, bronze, or other copper containing alloys or galvanized metals. Do not run pumps with the discharge or suction valves closed; pump must be on circulation. If material is evaporated to dryness, special hazards are involved and special fire fighting precautions and methods are recommended.

Storage: Keep away from heat.

**Section VIII Exposure Controls/Personal Protection**

Engineering Controls: Unless heated, sprayed or agitated to produce mist, natural ventilation should be adequate.

PERSONAL PROTECTION:

Eye Protection: Wear chemical safety goggles. Do not wear contact lenses.

Protective Clothing: Wear rubber gloves and protective clothing if there is prolonged or repeated contact with liquid.

Respiratory Protection: Respirators are not required for normal ventilation. If a misty condition prevails due to heat spraying or agitation, a mist respirator approved by NIOSH should be worn. If heated to decomposition or in fire situation, utilize a self-contained breathing apparatus.

Other Protective Clothing or Equipment: Respirators are not required for normal ventilation. If misty condition prevails due to heat, spraying or agitation, a mist respirator approved by NIOSH should be worn.

**Section IX Physical and Chemical Properties**

Appearance/Color/Odor: This material at normal conditions is a clear or golden liquid, slight ammonia odor.

<u>Melting Point Range:</u>	Type	(°F)	(°C)	<u>Boiling Point:</u>	242.5°F for 60% Solution
	Uan 32	29	-2	<u>Boiling Point Range:</u>	Not Available
	Uan 30	15	9	<u>Vapor Pressure(mmHg):</u>	Not Applicable
	Uan 28	1	-17		

<u>Solubility in Water:</u>	100%
<u>Specific Gravity:</u>	Uan 32 1.326      Molecular Weight      Ammonium Nitrate 80.06
	Uan 30 1.303      Urea 60.07
	Uan28 1.280      %Volatiles      Not Applicable
<u>Vapor Density:</u>	Not Applicable      Evaporation Rate      Not Applicable
<u>Bulk Density:</u>	Uan 32 11.04 lbs/gal
	Uan 30 10.85 lbs/gal
	Uan 28 10.66 lbs/gal
<u>pH:</u>	Typically 6.3 - 7.2
<u>Viscosity:</u>	Uan 32 5.5 Centipoise
	Uan 28 3.4 Centipoise

**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:** Avoid welding on pipes or tanks which have contained Uran® solution until they have been thoroughly washed out with water. Avoid containers, piping, or fittings made of brass, bronze, or other copper containing alloys or galvanized metals.**Materials to Avoid (Incompatibilities):** Strong oxidants, (e.g. Chlorine, Hypochlorites). Easily oxidizable materials, including most organics. Water-reactive materials, such as Oleum.**Hazardous****Decomposition Products:** Thermal decomposition, particularly of the residue from evaporation, would yield Ammonia, Hydrogen Sulfide, Oxides of Nitrogen.**Section XI. Toxicological Information****Significant Routes****of Exposure:** Eyes, Digestive System, Respiratory System, Skin**Toxicity to Animals:** Oral, OECD Guideline 425 (rat): LD<sub>50</sub> = >2000 mg/kg. Found non-lethal to rats at 20.2 Mg/L in one-hour exposure.

Uan Solution is a blend of Urea, Ammonium Nitrate and water. Following is the individual toxicity information for Ammonium Nitrate and Urea:

**Ammonium Nitrate:**Acute Oral Toxicity: (rat): LD<sub>50</sub> = 2,800 —4,500 mg/kg bw. Acute Inhalation Toxicity: 4-h: (rat): LC<sub>50</sub> > 88.8 mg/L. Acute Toxicity: Other Routes: Minimum lethal dose (rat) 0.065mg NH<sub>4</sub>NO<sub>3</sub>-N. Acute Dermal Toxicity: (Sprague Dawley rat, albino): LD<sub>50</sub> > 5,000 mg/kg. Repeated Dose Toxicity: Inhalation: 2 weeks: NOAEL (rat) 185 mg/rn<sup>3</sup>. Inhalation: 4 weeks: NOAEL = 1 mg/rn<sup>3</sup> Eye Irritation/Corrosion: No data available. Skin Irritation/Corrosion: 48 hr (rabbit): Moderately irritating**Urea:**Acute Oral Toxicity: (rat): LD<sub>50</sub> = 14,300—15,000 mg/kg; (mouse) 11,500 – 13,000 mg/kg; LD50(cattle): 510 mg/kg. Repeated Dose: (rat) 12 —month carcinogenicity screening – NOAEL = 2250 mg/kg. Skin Irritation/Corrosion: Mouse – Not irritating (10% solution) Eye Irritation/Corrosion: Rabbit – Not irritating (50% solution)

Not found to be toxic by oral exposure as defined by OSHA. Based on toxicity data for another compound (i.e., ammonium nitrate), not expected to be toxic by dermal and Inhalation exposure as defined by OSHA

**Special Remarks on Ammonium Nitrate:****Toxicity to Animals:** Developmental Toxicity/Teratogenicity: Not teratogenic to rats at 57 mg/kg bw (NOAEL > 57 mg/kg/day).**Bacterial Genetic Toxicity In-vitro:** (*Salmonella typhimurium*): Bacterial reverse mutation assay: Negative**Urea:****Bacterial Genetic Toxicity in vitro:** (*Salmonella typhimurium*) – Bacterial reverse mutation assay- Negative; Chinese Hamster – Chromosomal aberration test – Positive (very high dose); Mouse – Positive (very high dose). Genetic**Toxicity In vivo: Mouse** – Bone marrow cytogenetic test – Positive (extremely high dose) : Toxicity to**Reproduction:** No toxic effects on mouse gonads up to 6,750-mg/kg day. No toxic effects on rat gonads up to 2,250-mg/kg day. Developmental Toxicity / Teratogenicity. Not teratogenic.**Other Effects on Humans.** Symptoms may include excessive action of the kidneys and perhaps bowels**Ammonium Nitrate:** No other effects known.**Urea:**

Despite extensive medical use, no significant side effects on humans have been noted.

**Special Remarks on****Chronic Effects on****Humans:** Ingestion may cause blood disorders (Methemoglobinemia) in infants. (This means loss of efficiency in the red blood cells and is evidenced by blue skin).**Ammonium Nitrate:**

Large amounts, 15 to 25 grams, may have serious or even fatal effects. Small repeated doses may lead to weakness, general depression, headache and mental impairment. Symptoms of over exposure, acute cyanosis, nausea, vertigo, collapse, vomiting/abdominal pain, and tachycardia (rapid heartbeat), coma, convulsion and death can occur.

**Urea:**

No other effects known.

**Special Remarks on Ammonium Nitrate:****Other Effects on Humans:** Nitrate formation in intestine may cause methemoglobinemia.**Humans:****Urea:**

May be irritating at &gt; 10% concentration; not a skin sensitizer.

Section XII Ecological Information

**Ecotoxicity:** Aquatic toxicity considerations indicate Uan<sup>5</sup> solution is of a low order of toxicity to the species tested. Since Uan solution is a fertilizer, it may promote eutrophication in waterways.

**Ammonium Nitrate:**

Acute Toxicity to Fish (*Cyprinus carpio* L): 48-h: LC<sub>50</sub> 1.15—1.72 mg NH<sub>3</sub>L; (Chinook Salmon, rainbow trout, bluegill) 96-h: LC<sub>50</sub>= 420 – 1360 mg NO<sub>3</sub>/L Chronic Toxicity to Fish: No data available. Acute Toxicity to Aquatic Invertebrates: (*Daphnia magna*) EC<sub>50</sub> = 555 mg/L. Chronic Toxicity to Aquatic invertebrates: (*Bullia digitalis*) Up to 7 days: NOEC = 300 mg/L.

**Urea:**

Acute Toxicity to Fish: 96-h LC<sub>50</sub> > 9,100 mg/L. Acute Toxicity to Daphnia Aquatic invertebrates: (*Daphnia magna*) 24 . h EC50: > 10,000 mg/L. Toxicity to Aquatic Plants: (*Scenedesmus quadricauda*) 192 hr cell multiplication inhibition test – Ti> 10,000 mg/L. Toxicity to Other Non-Mammalian Terrestrial Species: (Pigeon) – Subcutaneous – LOLO = 16,000 mg/kg.

Non-toxic to aquatic organisms as defined by USEPA.

**Environmental Fate: Ammonium Nitrate:**

**Stability in water:** Stable to hydrolytic degradation. **Stability in Soil:** Ammonium ions bind to clay particles and leach slowly or not at all to ground water, whereas the nitrate can leach significantly. **Monitoring Data:** NH<sub>4</sub> background: 0.01- 10mg NIL. NO<sub>3</sub> background: 0.3- 100mg N/L. Transport: Worldwide loss after application 0.004 . 1.2 Tglyr.

**Distribution:** 0.251% to air; 45.4% to water; 54.2% to soil; 0.0757% to sediment

**Urea:**

**Stability in water:** T<sub>112</sub>> 1 year. Transport: 0.16% in air; 99.84% in water

**Toxicity:** No known toxicity.

**Degradation:** No degradation products known

**Products:**

Section XIII Disposal Considerations

**Product Disposal:** Disposal of Uan fertilizer may be subject to federal, state and local laws and regulations.

**General Comments:** Users of this product should review their operations in terms of applicable federal, state and local laws and regulations, then consult with appropriate regulatory agencies before discharging or disposing of waste material.

Section XIV Transportation Information

	USDOT	
<b>Proper Shipping Name:</b>	Not Regulated	
<b>Hazard Class:</b>		
<b>identification Number:</b>		
<b>Packing Group (Technical Name):</b>		
<b>Labeling / Placarding:</b>		
<b>Authorized Packaging:</b>		

Notes Uan (Nitrogen Fertilizer Solution) is classified by the USCG as an NLS under 33 CFR 154 per reference 46 CFR 153 (and Marpol)

**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 Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories

**Pressure Generating:** No **Reactivity:** No **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:** This product contains the following substances subject to the reporting requirements 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
Uan	---	-	See Note(1)	Yes	Yes	See Note (2)
Aqueous Ammonia	1336-21-6	7.87- 10.1	NA	NA	NA	Yes
Nitrate Compounds	N/A	28.7-36.8	NA	NA	NA	Yes

NOTE:(1) There is no RQ reporting requirement for UAN but local and state requirements may apply. Check local and state Laws. Uan solutions contain alkalinity as ammonia as high as .05% by weight (as ammonia). Any spill that exceeds 1,000,000 lbs. May exceed the 1000 lb. RQ for Ammonium Hydroxide. (2) UAN contains ammonium nitrate which is a source of aqueous ammonia and water dissociable nitrate.

**CERCLA / Superfund 40 CFR Parts 117, 302:** If this product contains components subject to substances designated as CERCLA Repertable Quantity (RA) Substances, it will be designated in the above table with the RQ value in pounds. If there is a release of RQ substances to the environment, notification to the National Response Center, Washington, D.C. (1-800-424-8802) is required

**EINECS#** (Ammonium Nitrate) 229-347-8

(Urea) 200-315-5

**California: Prop 65:** This is not a chemical known to cause cancer, nor is it listed.

**Section XVI Other Information**

**NFPA Hazard Ratings:** **Health:** 1 **Fire:** 0 **Reactivity:** 3 **Special Hazards:** OX

**0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme**

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Ouachita Fertilizer Company  
P O Box 4540  
Monroe, Louisiana 71211

15-Jan-04

### SPECIFICATION SHEET

GRADE: 17% Ammonium Nitrate Solution

#### PLANT NUTRIENT CONTENT

TOTAL NITROGEN (N)	17%
AVAILABLE PHOSPHATE (P205)	0%
SOLUBLE POTASH (K20)	0
TOTAL SULFUR (S)	0

#### TOTAL PROPERTIES

WEIGHT PER GALLON	10.3 - 10.5
SPECIFIC GRAVITY	1.25 - 1.27
POUNDS (N) PER GALLON	1.75 - 1.785
POUNDS (P205) PER GALLON	0.00
POUNDS (K20) PER GALLON	0
POUNDS (S) PER GALLON	0
p H	4.5 - 5.0
GALLONS/TON	190 - 195

DERIVED FROM AMONIUM NITRATE AND WATER

# MATERIAL SAFETY DATA SHEET

## Section I – Product and Company Identification

**Ouachita Fertilizer Company**  
**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 sulfide, ethyl sulfate, ethylene oxide, gold, mercury, nitrogen dioxide, oleum, phosphoric 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

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,

notification

to the National Response Center, Washington D.C.

(1-800-424-8802)

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**

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5/12/2004

## SPECIFICATION SHEET

GRADE: 22% UREA SOLUTION

### Nutrient Content:

Total Nitrogen (N)	22%
Available Phosphate (P205)	0
Soluble Potash (K20)	0
Total Sulfur (S)	0

### Total Properties:

Weight per Gallon	9.44 lbs
Specific Gravity	1.132
Pounds (N) per Gallon	2.077
Pounds (P205) per Gallon	0
Pounds (K20) per Gallon	0
Pounds (S) per Gallon	0
pH	6.0 - 7.2
Gallons per ton	211.86

Derived from Urea and water

**OUACHITA FERTILIZER COMPANY**

**EMERGENCY TELEPHONE: CHEMTREC 1-800-424-9300**

**MATERIAL SAFETY DATA SHEET**

**SECTION 1  
PRODUCT INFORMATION**

PRODUCT NAME: 22-0-0 Liquid Fertilizer  
CAS NUMBER: None  
FORMULA: Not available  
COMMON NAME: Mixed Fertilizer Solution

TYPICAL COMPOSITION: Total Nitrogen, as N 22%  
Total Phosphorous, as P2O5 0%  
Total Potash, as K2O 0%  
Total Sulfur, as S 0%

DERIVED FROM: Urea Solution

**SECTION 2  
PHYSICAL DATA**

BOILING POINT: 212 Degrees Fahrenheit  
SOLUBILITY: Completely soluble with water  
VAPOR PRESSURE: N/A  
VAPOR DENSITY: N/A  
SPECIFIC GRAVITY: 1.14  
PH: 6.0-7.2  
APPEARANCE & ODOR: Light brown to light green in color with slight ammonia odor.

**SECTION 3  
FIRE AND EXPLOSION HAZARD INFORMATION**

FLASH POINT: N/A  
EXTINGUISHING MEDIA: N/A

**SPECIAL FIREFIGHTING**

PROCEDURES: Wear full protective clothing and self contained breathing apparatus. This material is a fire retardant.

**SECTION 4**  
**HEALTH INFORMATION**

EYES: Liquid can irritate eyes  
SKIN: Liquid can irritate skin  
INHALATION: Exposure via inhalation unlikely.  
INGESTION: None listed  
EXPOSURE STANDARDS: Standards for mixed fertilizer solutions have not been established.

**SECTION 5**  
**PERSONAL PROTECTION INFORMATION**

VENTILATION: N/A; product is not volatile  
EYES: Tightly fitted safety goggles or faceshield recommended.  
SKIN: No personal equipment normally required  
RESPIRATORY: No personal protection equipment normally required

Handle with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin, and clothing.

**EMERGENCY AND FIRST AID PROCEDURES:**

EYES: Hold eyelids open and flush eyes with plenty of water  
Seek medical attention  
SKIN: Wash affected areas with plenty of soap and water  
INHALATION: N/A  
INGESTION: If exposed person is conscious, drink plenty of water and then seek medical attention. If unconscious, seek medical attention immediately.

**SECTION 6**  
**REACTIVITY**

STABILITY: Completely stable

CONDITION TO AVOID: N/A

INCOMPATIBILITY  
MATERIAL TO AVOID: N/A

HAZARDOUS  
POLYMERIZATION: Will not occur

**SECTION 7**  
**SPILL OR LEAK PROCEDURES**

IN CASE OF SPILLS: Isolate and stop the leak. Contain the spill, if possible, and recover any reusable product.

WASTE DISPOSAL METHOD: Solution can be distributed on land since fertilizer does not contain materials of environmental concern. Consult local, state or federal environmental agencies for acceptable disposal procedures and locations.

CERCLA REPORTABLE QUANTITIES: N/A

**SECTION 8**  
**TRANSPORTATION REGULATIONS**

DOT: Not regulated by DOT

**SECTION 9**  
**SPECIAL PRECAUTIONS**

No special precautions need to be taken into consideration in the handling and storage of this material.

We provide this MSDS as a service to our customers. We believe this information to be reliable. Ouachita Fertilizer Company provides no express or implied warranties as to the accuracy or use of this information.

03/23/2001

Ouachita Fertilizer Company  
P O Box 4540  
Monroe, Louisiana 71211

19-Jan-04

SPECIFICATION SHEET

GRADE: 10-34-0 LIQUID FERTILIZER

PLANT NUTRIENT CONTENT

TOTAL NITROGEN (N)	10%
AVAILABLE PHOSPHATE (P205)	34%
SOLUBLE POTASH (K20)	0
TOTAL SULFUR (S)	0

TOTAL PROPERTIES

WEIGHT PER GALLON	11.7
SPECIFIC GRAVITY	1.4
POUNDS (N) PER GALLON	1.15
POUNDS (P205) PER GALLON	3.92
POUNDS (K20) PER GALLON	0
POUNDS (S) PER GALLON	0
pH	5.9
GALLONS/TON	173.3

DERIVED FROM PHOSPHORIC ACID AND ANHYDROUS AMMONIA

ISSUE DATE: 02/18/03

MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE: CHEMTREC 1-800-424-9300  
OUACHITA OFFICE – MONROE, LOUISIANA 318-388-0400  
OUACHIT A OFFICE – NEW IBERIA, LOUISIANA 337-367-8233

SECTION 1  
PRODUCT INFORMATION

PRODUCT NAME: 10-34-0  
CAS NUMBER: NONE  
FORMULA: NOT AVAILABLE  
COMMON NAME: MIXED FERTILIZER SOLUTION

TYPICAL COMPOSITION:

Total Nitrogen, as N	<u>10%</u>
Available Phosphorus, as P2O5	<u>34%</u>
Total Potash, as K2O	<u>0%</u>
Total Sulfur, as S	<u>0%</u>

Derived from: Phosphoric Acid and Anhydrous Ammonia

SECTION 2  
PHYSICAL DATA

BOILING POINT: 212 Degrees Fahrenheit  
SOLUBILITY: Completely soluble with water  
VAPOR PRESSURE: N/A  
VAPOR DENSITY: N/A  
SPECIFIC GRAVITY: 1.4  
PH: 6.0 TO 7.2  
APPEARANCE & ODOR: Clear, dark green liquid with Ammonia odor.

SECTION 3  
FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT: N/A  
EXTINGUISHING MEDIA: N/A  
SPECIAL FIREFIGHTING  
PROCEDURES: Minimize contact of liquid with eye, skin, and clothing.  
Avoid using containers, pipes and fittings made of  
Brass, zinc, copper and aluminum.

HEALT SECTION 4  
H INFORMATION

EYES: Liquid can irritate eyes  
SKIN: Liquid can irritate skin  
INHALATION: Exposure via inhalation unlikely  
INGESTION: None listed  
EXPOSURE STANDARDS: Standards for mixed fertilizer solutions have not been  
estab lished

SECTION 5  
PERSONAL PROTECTION INFORMATION

VENTILATION: N/A; product is not volatile  
EYES: Tightly fitted safety goggles or faceshield recommended  
SKIN: Rubber-coated gloves and clothing recommended  
if prolonged or repeated exposure of skin to liquid.  
RESPIRATORY: No personal protection equipment normally required

Handle with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin, and clothing.

SECTION 6  
REACTIVITY

STABILITY: Com pletely stable  
CONDITION TO AVOID: High temperature  
INCOMPATIBILITY MATERIAL  
TO AVOID: Zinc clad, copper bearing alloys and  
Aluminum. Water reactive materials.  
HAZARDOUS POLYMERIZATION: Will not occur

SECTION 7  
SPILL OR LEAK PROCEDURES

IN CASE OF SPILLS: Isolate and stop the leak. Contain the spill, if possible, and recover any reusable product.

WASTER DISPOSAL  
METHOD: Solution can be distributed on land since fertilizer does not  
contain materials or environmental concern. Consult local,  
state or federal environmental agencies for acceptable  
disposal procedures and locations.  
CERCLA REPORTABLE  
QUANTITIES: N/A

SECTION 8  
TRANSPORATION REGULATIONS

DOT: N/A

SECTION 9  
SPECIAL PRECAUTIONS

No special precautions need to be taken into consideration in the handling and storage of this material.

WE PROVIDE THIS DATA SHEET AS A SERVICE TO OUR CUSTOMERS; AND IN THE EVENT OF ACCIDENT, TO REGULATORY AND ENFORCEMENT AGENCIES. WE BELIEVE THE INFORMATION TO BE RELIABLE. OUACHITA FERTILIZER COMPANY PROVIDES NO EXPRESS OR IMPLIED WARRANTIES AS TO THE ACCURACY OR USE OF THIS INFORMATION.

Ouachita Fertilizer Company  
P O Box 4540  
Monroe, Louisiana 71211

20-Jan-99

### SPECIFICATION SHEET

GRADE: MIXED GRADE LIQUID FERTILIZER

#### PLANT NUTRIENT CONTENT

TOTAL NITROGEN (N)	0-32%
AVAILABLE PHOSPHATE (P205)	0-34%
SOLUBLE POTASH (K20)	0-20%
TOTAL SULFUR (S)	0-4%

#### TOTAL PROPERTIES

WEIGHT PER GALLON	9.18- 12.02
SPECIFIC GRAVITY	1.1 - 1.44
POUNDS (N) PER GALLON	0 - 4.087
POUNDS (P205) PER GALLON	0 - 4.087
POUNDS (K20) PER GALLON	0 - 2.404
POUNDS (S) PER GALLON	0 - 0.52
p H	6.2 - 6.8
GALLONS/TON	166 - 217

DERIVED FROM PHOSPHORIC ACID AND ANHYDROUS AMMONIA, UREA AMMONIUM NITRATE SOLUTIONS, LIQUID UREA, AMMONIUM THIOSULFATE, POTASSIUM CHLORIDE

ISSUE DATE: 02/18/03

MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE: CHEMTREC 1-800-424-9300  
OUACHITA OFFICE – MONROE, LOUISIANA 318-388-0400  
OUACHITA OFFICE – NEW IBERIA, LOUISIANA 337-367-8233

SECTION 1  
PRODUCT INFORMATION

PRODUCT NAME: MIXED GRADE FERTILIZER  
CAS NUMBER: NONE  
FORMULA: NOT AVAILABLE  
COMMON NAME: MIXED FERTILIZER SOLUTION

TYPICAL COMPOSITION: (Analysis Range)  
Total Nitrogen, as N 0-32  
Available Phosphorus, as P205 0-34  
Total Potash, as K20 0-20  
Total Sulfur, as S 0-04

Derived from: Phosphoric Acid, Anhydrous Ammonia; Urea, Ammonium Polyphosphate, Urea-Ammonium Nitrate Solution; Potassium Chloride; Ammonium Thiosulfate

SECTION 2  
PHYSICAL DATA

BOILING POINT: 212 Degrees Fahrenheit  
SOLUBILITY: Completely soluble with water  
VAPOR PRESSURE: N/A  
VAPOR DENSITY: N/A  
SPECIFIC GRAVITY: 1.1 to 1.44  
PH: 6.0 TO 7.2  
APPEARANCE & ODOR: Light brown to light green in color with slight ammonia odor.

SECTION 3  
FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT: N/A  
EXTINGUISHING MEDIA: N/A  
SPECIAL FIREFIGHTING PROCEDURES: Wear full protective clothing and self contained breathing apparatus.

HEALT SECTION 4  
H INFORMATION

EYES: Liquid can irritate eyes  
SKIN: Liquid can irritate skin  
INHALATION: Exposure via inhalation unlikely  
INGESTION: None listed  
EXPOSURE STANDARDS: Standards for mixed fertilizer solutions have not been estab lished

SECTION 5  
PERSONAL PROTECTION INFORMATION

VENTILATION: N/A; product is not volatile  
EYES: Tightly fitted safety goggles or faceshield recommended  
SKIN: No personal equipment normally required  
RESPIRATORY: No personal protection equipment normally required

Handle with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin, and clothing.

SECTION 6  
REACTIVITY

STABILITY: Com pletely stable  
CONDITION TO AVOID: N/A  
INCOMPATIBILITY MATERIAL  
TO AVOID: N/A  
HAZARDOUS POLYMERIZATION: Will not occur

SECTION 7  
SPILL OR LEAK PROCEDURES

IN CASE OF SPILLS: Isolate and stop the leak. Contain the spill, if possible, and recover any reusable product.

WASTER DISPOSAL  
METHOD: Solution can be distributed on land since fertilizer does not contain materials or environmental concern. Consult local, state or federal environmental agencies for acceptable disposal procedures and locations.  
CERCLA REPORTABLE  
QUANTITIES: N/A

SECTION 8  
TRANSPORATION REGULATIONS

DOT: N/A

SECTION 9  
SPECIAL PRECAUTIONS

No special precautions need to be taken into consideration in the handling and storage of this material.

WE PROVIDE THIS DATA SHEET AS A SERVICE TO OUR CUSTOMERS; AND IN THE EVENT OF ACCIDENT, TO REGULATORY AND ENFORCEMENT AGENCIES. WE BELIEVE THE INFORMATION TO BE RELIABLE. OUACHITA FERTILIZER COMPANY PROVIDES NO EXPRESS OR IMPLIED WARRANTIES AS TO THE ACCURACY OR USE OF THIS INFORMATION.

Ouachita Fertilizer Company  
P O Box 4540  
Monroe, Louisiana 71211

15-Jan-04

### SPECIFICATION SHEET

GRADE: 17% Ammonium Nitrate Solution

#### PLANT NUTRIENT CONTENT

TOTAL NITROGEN (N)	17%
AVAILABLE PHOSPHATE (P205)	0%
SOLUBLE POTASH (K20)	0
TOTAL SULFUR (S)	0

#### TOTAL PROPERTIES

WEIGHT PER GALLON	10.3 - 10.5
SPECIFIC GRAVITY	1.25 - 1.27
POUNDS (N) PER GALLON	1.75 - 1.785
POUNDS (P205) PER GALLON	0.00
POUNDS (K20) PER GALLON	0
POUNDS (S) PER GALLON	0
p H	4.5 - 5.0
GALLONS/TON	190 - 195

DERIVED FROM AMONIUM NITRATE AND WATER

# Material

# Safety Data Sheet Ouachita Fertilizer Company

**Trade Name:** Ammonium Nitrate Solution (17-0-0 AN)  
**Registration No:** None

## SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

**Manufacturer or Formulator:** Ouachita Fertilizer Company  
PO. Box 4540  
Monroe, Louisiana 71211  
**Emergency Phone- Chemtrec:** 1- 800-424-9300

**Product Name:** Ammonium Nitrate Solution (17-0-0 AN)  
**Common Name:** Ammonium Nitrate 50% Aqueous Solution  
**Chemical Type:** Salt solution

## SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name and Synonyms	C.A.S. No.	Chemical Formula	WT%	TIV Hazardous	PEL
Ammonium Nitrate	6484-52-2	NH4NO3	50	N.E. Non-hazardous	Not available
Water	7732-18	H2O	50	Not listed	Not available

## SECTION 3 HAZARDS IDENTIFICATIONS

**Ingestion:** No hazard in normal industrial use Ingestion of large amount may cause systemic ammonia poisoning and nitrate poisoning.  
**Inhalation:** No hazard under normal conditions.  
**Eye Contact:** May be aggravating to eyes.  
**Skin Absorption:** Not absorbed through skin.  
**Skin Contact:** May be aggravating to skin  
**Effects of Overdose:** Ingestion of large amounts may cause dizziness, abdominal cramps, vomiting, and diarrhea, discomfort to skin and eyes.

## SECTION 4 FIRST AID MEASURES

**Ingestion:** For ingestion of large amounts, give 2-3 glasses of water and induce vomiting. Seek medical attention if condition persists.  
**Inhalation:** If exposed to thermal decomposition gases, evacuate the person from area and, if necessary, give artificial resuscitation. Keep person at rest and call a physician.  
**Eyes:** Flush eyes with fresh running water for 15 minutes. If condition persists, call a physician  
**Skin:** Wash skin with soap and water. Seek medical attention if condition persists

## SECTION 5 FIRE FIGHTING MEASURES

**Extinguishing Media:** Non-flammable liquid. Use media suitable to extinguish source of fire.  
**Special Fire Fighting Procedures:** None in liquid state.  
**Unusual Fire and Explosion Hazards:** None in liquid state. Organic and oxidizable materials can sensitize dry Ammonium Nitrate to a readily explodable state; can detonate if heated under confinement with high pressure

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Environmental Precautions:** Low toxicity for fish Do not contaminate any waterway or any body of water by direct application, cleaning of equipment, or disposal.  
**Steps to be taken in case material is released or spilled:**  
Dike area and maximize recovery Pump into tank or absorb in diatomaceous earth. Sweep up and place into containers for recycle or disposal. Wash area with water Prevent entry into sewer or watercourses

## SECTION 7 HANDLING AND STORAGE

**Precautions to be taken in handling and storing:**  
Temperatures should be kept above 32°F to keep solution liquid and pumpable. Do not expose to fire. Store in a well ventilated area DO NOT ALLOW TO DRY

## SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation Protection:** Adequate ventilation  
**Respiratory Protection:** None required under normal conditions.  
**Protective Clothing:** Normal work clothing and impervious gloves.  
**Eye Protection:** Safety glasses with side shields or chemical splash-proof goggles  
**Other:** Eyewash fountain and safety shower in area.

**Trade Name:** Ammonium Nitrate Solution (17-0-0 AN)  
**Registration No:** None

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

<b>Boiling Point:</b> Salt decomposes @ 350°F	<b>Solubility in Water:</b> Complete
<b>Specific Gravity:</b> 1.270 @ 60°F	<b>% Volatiles (by volume):</b> Not applicable
<b>Flashpoint:</b> Non-flammable	<b>Vapor Pressure, mm Hg:</b> Not applicable
<b>pH:</b> 10% solution: 4.5-5.0	<b>Reaction with Water:</b> None
<b>Appearance:</b> Clear solution.	

**Extinguishing Media:** Water or media suitable to extinguish source of fire

**SECTION 10 STABILITY AND REACTION**

**Stability (Normal Conditions):** Stable  
**Conditions to Avoid:** High temperatures and fire conditions.  
**Incompatibility (Material to Avoid):** Organic and easily oxidizable matter.  
**Hazardous Decomposition Products:** Under extreme fire conditions, may liberate hazardous gases of oxides of nitrogen and ammonia.  
**Hazardous Polymerization:** Will not occur

**SECTION 11 TOXICOLOGY INFORMATION**

**Acute Dermal Toxicity:** LOSD (rat) is greater than 5,000 mg/kg (ppm); not acutely toxic by dermal exposure (TFI Product Testing Results, OECD Guideline 402)  
**Acute Oral Toxicity:** LOSD (rat) is 1,480-1,770 mg/kg; not acutely toxic by oral exposure. (TFI Product Testing Results, OECD Guideline 425)  
**Acute Inhalation Toxicity:** 4-hour LC50 (rat) is greater than 88,8000 mg/m3; not toxic by inhalation. (TFI Product Testing Results)  
**Acute Aquatic Toxicity:** Fish 48-hour LC50 is 95-102 mg total NH3/L; daphnia 24-hour EC50: 124.9 mg total NH3/L. Slightly toxic to aquatic organisms. (TFI Product Testing Results)

**SECTION 12 ECOLOGICAL INFORMATION**

None listed

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste Disposal Procedures:** Pump into tank or absorb in diatomaceous earth product, sweep up and place into container for use or disposal  
Follow local, state and federal regulations for disposal Could be used as a fertilizer using good agronomic practices

**SECTION 14 TRANSPORTATION INFORMATION**

<b>Shipping name:</b> Not regulated by D.O. T	<b>C.A.S. Number:</b> See "Ingredients"
<b>Hazard Class:</b> None	<b>D.O. T. Number:</b> None
<b>Reportable Quantity (RQ):</b> None	<b>Haz Waste No:</b> None
<b>Labels Required:</b> None	<b>EPA Regist No:</b> None
<b>Placard:</b> None	

**SECTION 15 REGULATORY INFORMATION**

**Carcinogenicity:** by IARC?: Yes ( ) No (X) by NTP?: Yes ( ) No (X)

This product contains ammonium nitrate solution which is subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**SECTION 16 OTHER INFORMATION**

<b>Flash Point (Test Method):</b> Non-flammable	<b>Flammable Limits</b> LOWER UPPER
<b>Autoignition Temperature:</b> Not applicable	(% BY VOLUME) N/A N/A

**MSDS Version Number:** 1

**Disclaimer:** This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. **NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED.** It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

**Ouachita Fertilizer Company**  
**P O Box 4540**  
**Monroe, Louisiana 71211**

**(318) 388-0400**

1/30/2004

## **Green Phosphoric Acid**

### **Phosphoric Acid Green**

**34-75% H<sub>3</sub>PO<sub>4</sub>**

**18.75 - 54% P<sub>2</sub>O<sub>5</sub>**

Composition / Information on ingredients

Component Name	Weight %	CAS Number
Ortho Phosphoric Acid	25-75%	7664-38-2
Non Hazardous	75-25%	

### **Typical Physical Properties**

Specific Gravity	1.39 - 2.0
Boiling Point	Approx. 270° F @ 1 Atmosphere
Lbs./gal @ 60 F	11.59 - 16.68
pH	Strongly Acid < 1.0
Vapor Pressure @78° F	5.0 mm Hg
Physical State	Liquid
Appearance	Green, viscous liquid
Odor	Odorless when cold, pungent when hot
% F	0.16 - 0.33
ppm As	5.0 - 10.6
ppm Cd	47.6 - 100.9
ppm Co	0.0 - 0.0
ppm Hg	0.0 - 0.0

ppm Mo	7.5 - 15.9
ppm Ni	0.8 - 1.6
ppm Pd	0.4 - 0.8
ppm Se	0.1 - 0.1
ppm Zn	496 - 1049

# Material Safety Data Sheet

**Trade Name:** Phosphoric Acid

**Registration No:** None

## Section 1 Chemical

## Product and Company Information

**Manufacturer or Formulator:** OUACHITA Fertilizer Company  
P.O. Box 4540  
Monroe, Louisiana 70121  
**Emergency Phone - Chemtrec:** 1-800-424-9300

**Product Name:** 0-25-0 to 0-54-0 Green Phosphoric Acid  
**Common Name:** Phosphoric Acid, Ortho Phosphoric Acid,  
Merchant Grade Phosphoric Acid  
**Chemical Type:** Phosphoric Acid

## Section 2

## Composition / Formulation Ingredients

Chemical Name and Synonyms	C.A.S. No.	Chemical Formula	WT% Hazardous	TLV	PEL
Ortho Phosphoric Acid 7664-38-2	H3P04	34	- 75% 1	mg/m3 1 3 mg/m3 STEL	mg/m3
Inert Ingredients			Non-Hazardous 66 - 25%		

## Section 3 Haz

## Effects Identification

**Ingestion:** Ingestion may result in irritation and burning of mucous membranes and/or gastrointestinal tract.  
**Inhalation:** Inhalation of acid mist may produce mild to severe irritation of respiratory tract. Some rail cars of Phosphoric acid may have an off gas of chlorine. Follow proper unloading procedures on this sheet under section 7 to eliminate possible exposure.  
**Eye Contact:** Will produce severe irritation. Prolonged contact may result in burn to eye causing permanent damage.  
**Skin Absorption:** May produce mild to severe irritations. Prolonged contact may result in chemical burns.  
**Skin Contact:** May produce mild to severe irritations. Prolonged contact may result in chemical burns.  
**Effects of Overdose:** Severe conjunctivitis which may result in permanent damage. Can result in nausea and vomiting with severe abdominal pain. Prolonged contact with acid mist can result in severe respirator irritation.

## Section 4 First

## Aid Measures

**Ingestion:** Dilute with 2-3 glasses of milk or water. Do not induce vomiting. Consult a physician immediately.  
**Inhalation:** Remove person to fresh air. If person is not breathing, perform artificial respiration if properly trained. Seek medical attention immediately.  
**Eyes:** Promptly flush eyes with clean, cool water for at least 15 minutes. Contact a physician immediately.  
**Skin:** Promptly remove contaminated clothing and rinse area with clear water for 15 minutes.

## Section 5 Fire

## Fighting Measures

**Extinguishing Media:** Non-flammable. Use media suitable to extinguish source of fire.  
**Special Fire Fighting Procedures:** When phosphoric acid mists from hot fires may be encountered, self-contained breathing apparatus (SCBA) should be worn.  
**Unusual Fire and Explosion Hazards:** Not listed

## Section 6 Accidental

## Release Measures

**Environmental Precautions:** Low toxicity to aquatic life. Do not contaminate any watercourse or other body of water by direct application, disposal, or cleaning of equipment.  
**Steps to be taken in case material is released or spilled:**  
Dike around spill for containment and recover for re-processing. Small spills can be safely neutralized with limestone or soda ash. Caustic soda should be avoided because of excessive reactivity.

## Section 7 Han

## dling and Storage

**Precautions to be taken in handling and storing:**  
When unloading a rail car always open vent valve on top of rail car before opening dome and let sit an adequate amount of time to mitigate possible exposure to any off gas of chlorine. Always wear proper protective equipment. Avoid storage and/or transfer in tanks, lines and other equipment constructed or materials not specifically designed and approved for phosphoric acid service. Avoid freezing weather below 1°F. Have adequate first aid water available.

## Section 8

## Exposure Controls / Personal Protection

**Ventilation Protection:** General area ventilation  
**Respiratory Protection:** Approved respirators suitable for protection against acid mists and vapors. Not required for normal work procedures, but if misting occurs and always during unloading, use a high efficiency particulate respirator or self-contained breathing apparatus, with a full face shield when exposed above the TLV. Check with respirator manufacturer to determine the appropriate type of equipment for a given application.  
**Protective Clothing:** Rubber clothing, chemical gloves, footwear and chemical hat or hood suitable for protection against acids.  
**Eye Protection:** Tight sealing splash proof goggles.  
**Other:** Eyewash and safety shower in work areas.

Trade Name: Phosphoric Acid  
Registration No: None

## Section 9 Physical and Chemical Properties

**Boiling Point:** Approx. 277°F @ 1 atmosphere  
**Specific Gravity:** 1.39 - 2.00  
**Flashpoint:** Not applicable  
**pH:** Strongly acidic; <1.0  
**Appearance:** Green, viscous liquid. Odorless when cold; pungent when hot  
**Extinguishing Media:** Non-flammable Use media suitable to extinguish source of fire.

**Solubility in Water:** Complete  
**% Volatiles (by volume):** <1.0  
**Vapor Pressure, mm Hg:** 5.0 @ 78°F  
**Reaction with Water:** Exothermic, produces heat.

## Section 10 Stability and Reactivity

**Stability (Normal Conditions):** Stable  
**Conditions to Avoid:** Avoid contact with strong alkalis or metals other than certain stainless steels.  
**Incompatibility (Material to Avoid):** Reacts violently with strong alkalis producing heat. Contact with many metals may result in severe corrosion attack of the metal and liberation of hydrogen gas.  
**Hazardous Decomposition Products:** High temperatures will liberate phosphorus oxides  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicology Information

**Acute Oral Toxicity:** LD50 (rat) is greater than 1,530 mg/kg; not acutely toxic by oral exposure (TFI Product Testing Results, OECD Guideline 425)  
**Acute Dermal Toxicity:** LD50 (rat) is greater than 3,160 mg/kg (ppm); not acutely toxic by dermal exposure. (TFI Product Testing Results, OECD Guideline 402).  
**Acute Inhalation Toxicity:** LC50 (guinea pig, mouse, rat, rabbit) is 61-1,689 mg/m<sup>3</sup>; highly toxic by inhalation. (TFI Product Testing Results)  
**Acute Fish Toxicity:** 96-hour LC50 is 3.0-35 mg/L (ppm); moderate toxicity to aquatic organisms (TFI Product Testing Results, OECD Guideline 203).

## Section 12 Environmental Information

None Listed

## Section 13 Disposal Considerations

**Waste Disposal Procedures:** Collect and reprocess where possible Following neutralization with limestone or soda ash, consult local, state and federal regulations before final disposal

## Section 14 Transportation Information

**Shipping Name:** RQ Phosphoric Acid, 8, UN1805, PG III  
**Hazard Class:** 8  
**Reportable Quantity (RQ):** 5000 lbs.  
**Labels Required:** Corrosive  
**Placard:** Corrosive  
**Packaging Group:** III  
Refer to 49 CFR 172.101 Hazardous Material Table for further provisions, packaging authorizations and quantity limitations.

**C.A.S. Number:** 7664-38-2  
**D.O. T. Number:** UN1805  
**Haz Waste No:** 0002  
**EPA Regist No:** None

## Section 15 Regulatory Information

**Carcinogenicity:** by IARC?: Yes ( ) No (X) by NTP?: Yes ( ) No (X)

This product contains phosphoric acid, CAS No 7664-38-2, which is subject to the reporting requirements of section 313 of Title III of the Superfund Amendments Act of 1986 and 40 CFR Part 372.

## Section 16 Other Information

<b>Flash Point (Test Method):</b>	Non-flammable	<b>Flammable Limits</b>	L	<b>OWER</b>	U	<b>PPER</b>
<b>Autoignition Temperature:</b>	Not applicable	(% BY VOLUME)	N/A		N/A	
<b>Hazard Rating (N.F.P.A.):</b>	<b>Health:</b> 2	<b>Fire:</b> 0	<b>Reactivity:</b> 0	0	<b>Specific:</b>	Not applicable

This N.F.P.A. rating is a recommendation by the manufacturer using the guidelines or published evaluations prepared by the National Fire Protection Association (N.F.P.A.).

MSDS Version Number: 1

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