

Terra Mississippi Nitrogen, Inc.
4612 Highway 49 East
Yazoo City, MS 39194

MATERIAL SAFETY DATA SHEET
MSDS No. 004

Revised Date: 01/17/05

PRODUCT NAME: AMMONIUM NITRATE FERTILIZER
TRADE NAME: AMTRATE
(Containing no more than 0.2% Organics)

Transportation Emergencies: (800) 424-9300 (CHEMTREC)
Health Emergencies: Contact Local Poison Center

CAUTION: Oxidizer

**AMMONIUM NITRATE CAN CAUSE IRRITATION TO
THE EYES, SKIN, AND THE RESPIRATORY TRACT.
WASH THOROUGHLY AFTER HANDLING.**

SECTION I – PRODUCT INFORMATION

<u>Formula</u>	<u>Chemical Family</u>	<u>CAS Number</u>
NH ₄ NO ₃	Inorganic Salt	6484-52-2

<u>Typical Composition:</u>	Ammonium Nitrate	98-100%
	Conditioning Agent	0-0.2%

Exposure Guidelines: TLV-TWA (1996-97): 10 mg/m³ from ACGIH as inhale-able dust.

SECTION II – PERSONAL PROTECTION INFORMATION

Eyes: It is recommended that if there is a potential for ammonium nitrate to contact the eyes that safety glasses/face shield or chemical goggles be worn.

Skin: It is recommended that rubber gloves be worn during normal contact to ammonium nitrate.

Respiratory: Decomposition of ammonium nitrate may produce nitrogen oxides. Use an air-supplied system to protect against these vapors.

Other: A safety shower and eyewash should be provided in an ammonium nitrate handling area.

SECTION III – HEALTH INFORMATION

ROUTES OF ENTRY

PHYSIOLOGICAL AND HEALTH EFFECTS

- Eyes: Ammonium nitrate is a mild irritant to the eyes.
- Skin: Ammonium nitrate is only slightly irritating to the skin.
- Inhalation: Can cause irritation. Systematic effects are not likely.
- Ingestion: Small repeated doses may lead to weakness, general depression, headache and mental impairment. 10 to 15 grams, may have serious or fatal effects.
- Toxicity: Oral – Rat LD50 = 2217 mg/kg
 Dermal – Rabbit LD50 = 3000 mg/kg

EMERGENCY AND FIRST AID PROCEDURES

- Eyes: Immediately flush with large quantities of water for at least 20 minutes. Seek medical attention.
- Skin: Wash thoroughly with water and soap.
- Inhalation: Remove patient to fresh air and monitor. If discomfort continues seek medical attention.
- Ingestion: DO NOT induce vomiting. If person is conscious, dilute stomach contents with 48 oz. of water or milk and seek medical attention immediately.

SYMPTOMS OF OVEREXPOSURE

- Acute: Cyanosis, nausea vertigo, collapse, vomiting/abdominal pain, and tachycardia (rapid heartbeat), tachypnea (rapid breathing), coma, convulsion, and death can occur.
- Chronic: Small repeated doses may lead to weakness, general depression, headache and mental impairment.

SECTION IV – REACTIVITY DATA

Stability:	Stable
Conditions to avoid:	Contamination with easily oxidizable matter.
Incompatibility:	Avoid mixing ammonium nitrate fertilizer with oxidizable material (wood chips, organic materials, sulfur, chlorides, phosphorous, finely divided metals, acids, flammable liquids, charcoal, diesel fuel and oils).

Ammonium Nitrate should not be blended with elemental Sulfur!

Hazardous Decomposition Products:	Can include ammonia, oxides of nitrogen and nitric acid.
Hazardous Polymerization:	Will not occur.

SECTION V – PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Solid prills or granules, white color and odorless, deliquescent.
Boiling Point:	Starts to decompose at 410°F
Melting Point:	311-337°F
Solubility:	By Wt. 66.4% at 70°F. Highly soluble.
Specific Gravity:	1.72 @ 70°F
Molecular Weight:	80.05 pH: (10% Solution) 6-7

SECTION VI – HANDLING AND STORAGE PRECAUTIONS

See NFPA 490 Code for Storage of Ammonium Nitrate (2002 Edition)

Store in well-ventilated area away from acute fire hazards and easily oxidizable materials. Do not store near dynamite, blasting caps or other explosives. Avoid contamination. Floor drains and recesses should be plugged or eliminated to prevent entrapment of flowing, molten nitrate during fire. Storage construction should be of non-combustible materials and preferably equipped with an automatic sprinkler system. Storage should be designed for safe release of pressure in emergency. Bagged ammonium nitrate fertilizer is subject to storage, stacking and quantity regulations. Follow federal, state and local regulations. See CFR 1910.109 regulations.

SECTION VII – FIRE PROTECTION INFORMATION

NFPA 704M rating: 0-0-3 OXY

Flash Point: Not Applicable

Extinguishing Media: Water

Flammable Limits (by volume in air): Not Applicable

Special Firefighting Procedures

Flood burning ammonium nitrate fertilizer with large volumes of low pressure water. Do not use salt water, carbon dioxide, dry chemicals or foam extinguishers. Never attempt to smother fire, such as by sealing off, closing a compartment or building doors when fire occurs. Do not add steam. Ammonium nitrate fertilizer does not have the property of spontaneous combustion. Fire fighters should wear approved self-contained breathing apparatus to protect themselves from the toxic fumes of decomposing ammonium nitrate, and protective clothing to guard against molten nitrate splashes should also be worn.

Unusual Fire and Explosive Hazards

Nitrogen oxide gases emitted on decomposition are extremely toxic. Contamination of ammonium nitrate with oil, diesel fuel, charcoal, sulfur, metal fines or other combustible substances could possibly cause an explosion. If an explosion is expected, surrounding area should be evacuated.

SECTION VIII – DEPARTMENT OF TRANSPORTATION REQUIREMENTS

DOT Shipping Name: Ammonium Nitrate Fertilizer

DOT Hazard Class: Class 5.1, Oxidizer

Packing Group III

UN/NA Identification Number: UN-1942

DOT Placard: Oxidizer 5.1, color: yellow

Refer to 49 CFR 172.101 Tables of Hazardous Materials for packaging authorizations and quantity limitations.

SECTION IX – CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN

Carcinogenic Effects: NONE by ACGIH, EPA, IARC, NTP, OSHA

Mutagenic Effects: NONE by ACGIH, EPA, IARC, NTP, OSHA

Tetratogenic Effects: NONE by ACGIH, EPA, IARC, NTP, OSHA

SECTION X – SPILL OR LEAK PROCEDURES

Environmental Impact

Ammonium nitrate fertilizer is a plant nutrient, however, large spills can kill vegetation. If water courses are contaminated it may promote eutrophication and cause fish kills. If drinking water is contaminated beyond 10 mg of nitrate nitrogen per liter by ammonium nitrate fertilizer, it should be reported to the proper authorities.

Precautions if Spilled or Released

Spilled ammonium nitrate fertilizer can be reused if kept dry and uncontaminated. After cleanup, contaminated area should be washed down with water. Do not allow wash water to enter drinking water supplies. In the event of spill or wash water entering sewer or waterway, notify sewer authorities or other appropriate agencies.

Spills that have become contaminated with organic matter or other combustible material may present a fire and explosion hazard. Such material should be shoveled into drums and dissolved in water to obtain at least 50 percent water solution. Depending upon the amount of toxicity of the contaminated material, the solution can be reused as a fertilizer or disposed of.

Waste Disposal Methods

If uncontaminated, recover and reuse as product. Consult state or federal regulatory agencies for acceptable disposal procedures and disposal locations.

Reportable Quantity: None established.

SECTION XI – REGULATORY INFORMATION

Occupational Safety and Health Administration (OSHA) – This product is considered a hazardous material under criteria of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Environmental Protection Agency:

TSCA – This product is listed in the TSCA inventory.

As distributed by Terra Mississippi Nitrogen, Inc., this product contains no compounds subject to reporting under Section 313 of SARA III and 40 CFR 372; however, these federal regulations do contain reporting requirements regarding water solutions of ammonia and nitrates. Additionally, the following federal environmental statutes (regulations) apply to this product: SARA Title III, Sections 311 & 312 (40 CFR 370).

Disclaimer

Terra Mississippi Nitrogen, Inc., believes that the information contained in this material safety data sheet is accurate as of the date indicated. However, it makes no warranty, express or implied, as to either the accuracy of the information or the properties, fitness or safety of the chemical identified in Part 1, and assumes no liability or responsibility in connection with the information contained herein or as a result of the use of this material safety data sheet. This material safety data sheet applies only to the chemical described and may not be valid if the chemical is altered, combined with another substance, or subjected to physical or chemical processes. Each company or person using or distributing this material safety data sheet is responsible for ensuring its accuracy, applicability, and suitability at the time and under the particular circumstances used or distributed.

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