

Safety Data Sheet

Prepared for:

Anchor Drilling Fluids USA, Inc.
2431 East 61st Street, Suite 710
Tulsa, Oklahoma 74136
918.583.7701

October 1, 2013

Section 1: Identification

Identification of the chemical as well as the recommended uses and the essential contact information of the supplier.

Product Identifier: Ammonium Nitrate

Common Name(s): Ammonium Nitrate

Chemical Family: N/A

Synonyms: Fertilizer, Ammonium Saltpeter, Nitric Acid, Ammonium Salt

Manufacturer, Importer, and/or Responsible Party Information

Name: Anchor Drilling Fluids USA, Inc.

Address: 2431 East 61st Street, Suite 710, Tulsa, Oklahoma 74136

Phone Number: 918.583.7701

Emergency Phone Number: CHEMTREC: 800.424.9300

Recommended Use of Chemical

Chemical Services: Drilling mud production

Use Restrictions: N/A

Section 2: Hazard(s) Identification

Identification of the hazards of the chemical presented and the appropriate warning information associated with those hazards.

Hazard Classification: C.4.1, C.4.2 & C.4.3 Acute Toxicity - Oral, Dermal & Inhalation:
Hazard Category 4

Signal Word: Warning

Hazard Statement(s): Harmful if ingested, in contact with skin or inhaled

Pictogram(s):

Exclamation mark



Precautionary Statement(s): Wear protective gloves and eye protection when handling

Store in well ventilated area

Description of any hazards not otherwise classified: None

Mixture Identification (if toxicity is unknown)

Percentage of the mixture consisting of ingredient(s) with unknown toxicity: N/A

Note: this is a total percentage of the mixture and not tied to the individual ingredient(s).

Section 3: Composition/Information on Ingredients	
<i>Identification of the ingredient(s) contained in the product, including impurities and stabilizing additives. This section includes information on substances, mixtures and all chemicals where a trade secret is claimed.</i>	
Substances	
Chemical Names:	Ammonium Nitrate
Common Names:	Ammonium Nitrate
Synonyms:	Fertilizer, Ammonium Saltpeter, Nitric Acid, Ammonium Salt
Chemical Abstract Service (CAS) Numbers:	6484-52-2
Any other unique identifiers:	None
Impurities and stabilizing additives (which are themselves classified and which contribute to the classification of the chemical):	None
Mixtures	
Product is a substance	
Recommended Use of Chemical	
Chemical Services:	Drilling mud production
Use Restrictions:	N/A
Trade Secret	
Is the specific chemical identity and/or exact concentration of composition withheld as a trade secret?	No

Section 4: First-Aid Measures	
<i>Description of the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.</i>	
Necessary first-aid instructions	
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration and seek medical treatment.
Acute Symptoms of Inhalation:	May cause difficulty breathing
Delayed Symptoms of Inhalation:	None known
Skin Contact:	Wash with plenty of soap and water
Acute Symptoms of Skin Contact:	May cause irritation
Delayed Symptoms of Skin Contact:	None known
Eye Contact:	Flush with plenty of water. If irritation develops, call a physician
Acute Symptoms of Eye Contact:	May cause irritation
Delayed Symptoms of Eye Contact:	None known
Ingestion:	Do not induce vomiting unless directed by a physician. Never anything by mouth to an unconscious person.
Acute Symptoms of Ingestion:	May cause nausea
Delayed Symptoms of Ingestion:	None known
Immediate Medical Care / Special Treatment	
Is immediate medical care or special treatment required?	No
If so, what is needed:	N/A

Section 5: Fire-Fighting Measures

Recommendations for fighting a fire caused by or including the chemical.

Suitable Extinguishing Equipment: Dry chemical, water spray, water fog, carbon dioxide, foam or sand & earth

Extinguishing equipment not appropriate: N/A

Specific hazards created from chemical burning: Strong oxidizer. Confinement can lead to detonation

Special protective equipment needed: Firefighters should wear normal protective equipment including a self-contained breathing apparatus. Do not use water jet. Use flooding quantities of water.

Section 6: Accidental Release Measures

Recommendations on the appropriate response to spills, leaks, or releases; including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment.

Personal Precautions: Keep away from heat sources. Keep container closed at all times. Store in dry, well ventilated area. Ensure adequate ventilation when handling

Emergency Procedure(s): Eliminate all ignition sources. Do not touch spilled material

Method(s) and material(s) used for containment: Water spray
Broom/shovel

Cleanup procedure(s): Keep substance damp using water spray and do not touch spilled material. Sweep up spilled material and repackage.

Section 7: Handling and Storage

Guidance on the safe handling practices and conditions for safe storage of the chemical.

Handling precautions: Protective gloves, safety goggles and NIOSH approved mask are recommended when handling product

Hygiene practices: Normal hygiene practices will suffice

Safe storage recommendation: Store in dry, well ventilated area. Ensure adequate ventilation when handling

Incompatible storage options: Damp areas or near heat/ignition sources

Section 8: Exposure Controls/Personal Protection

Identification of the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure.

OSHA Permissible Exposure Limits (PELs): Not listed

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs): Not listed

Exposure limit (recommended by manufacturer, importer or employer): N/A

Appropriate Engineering Controls: Store and handle in dry, well ventilated areas.

Recommendations for personal protective measures: Safety goggles, protective clothing/gloves and NIOSH approved mask are recommended

Special requirements of PPE, protective clothing or respirators: None

Section 9: Physical and Chemical Properties

Identification of physical and chemical properties associated with the substance or mixture.

Appearance (Physical State):	Powder
Color:	Off-White
Odor:	Ammonia
Odor Threshold:	Not regulated
Vapor Pressure:	N/A
Vapor Density:	N/A
pH:	4.5-6.0 @ 25 DEG (Acidic)
Relative Density:	N/A
Melting Point:	N/A
Freezing Point:	N/A
Solubility(ies):	Soluble in water
Initial Boiling Point:	Decomposition Temp: 210°C
Boiling Range:	N/A
Flash Point:	Closed Cup- Higher than 93.3°C (200°F)
Evaporation Rate:	N/A
Flammability:	1
Upper/lower flammability or explosive limits:	N/A
Partition Coefficient:	N/A
Auto-Ignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	N/A

Section 10: Stability and Reactivity

Description of the reactivity hazards of the chemical and the chemical stability information.

Reactivity

Description of specific test data: None

Chemical Stability

Is the chemical stable or unstable: Stable

Stabilizers needed to maintain chemical stability: None

Safety issues that may arise should the chemical change in physical appearance: None known

Other

Conditions in which hazardous reactions may occur: In contact with incompatible materials

Possibility of hazardous reactions: In normal conditions: low

Will chemical react or polymerize: No

Will chemical release pressure, heat, or any other hazardous conditions: Not in normal conditions

Conditions to avoid: Interaction with incompatible materials

Class(es) of incompatible material(s): Reactive with reducing agents, combustible material, organic materials, metals, and alkalis. Also incompatible with finely powdered metals, acetic acid, ammonium chloride, phosphorus, sodium perchlorate, sulfur bismuth, cadmium, chlorides, cobalt, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium-potassium alloy, organic materials, and combustible materials.

Known or anticipated hazardous decomposition products produced because of storage, use, or heating: Smoke, fumes, carbon monoxide and/or carbon dioxide

Section 11: Toxicological Information

Identification of toxicological and/or health effects.

Likely routes of exposure: Inhalation, skin/eye contact or ingestion

Delayed, immediate or chronic effects of short-term exposure: May cause irritation

Delayed, immediate or chronic effects of long-term exposure: None known

Numerical measurement of toxicity: Health: 2, Flammability: 1, Reactivity: 1

Description of symptoms (lowest to most severe): May cause irritation

Is chemical listed in the National Toxicology Program (NTP) Report on Carcinogens: No

Has chemical been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs: No

Has chemical been found to be a potential carcinogen by OSHA: No

Section 12: Ecological Information (non-mandatory)

Information to evaluate the environmental impact of the chemical if it were released to the environment.

Toxicity test results performed on aquatic and/or terrestrial organisms:	None
Does the chemical have the potential to degrade the environment (biodegradation, oxidation, hydrolysis, etc.):	No
Bioaccumulation test results:	None
Potential of chemical moving from soil to the groundwater:	Probable if spill is not remediated. Product may mix with water and penetrate soil to reach groundwater if not cleaned up properly
Other adverse effects:	None known

Section 13: Disposal Considerations (non-mandatory)

Guidance on proper disposal practices, recycling or reclamation of the chemical or its container. Safe handling practices to minimize exposure. (Refer to section 8 for more information)

Appropriate disposal containers:	Original packaging or clean chemical container with lid
Appropriate disposal methods:	Incineration
Physical and chemical properties that may affect disposal activities:	None known
Special precautions for landfills or incineration activities:	Strong oxidizer, confinement may lead to detonation
Is it advisable to utilize sewage disposal for this chemical:	No

Section 14: Transport Information (non-mandatory)

Guidance on classification information for shipping and transporting the chemical by road, air, rail, or sea.

This product is not DOT/IMO Hazardous Material

Section 15: Regulatory Information (non-mandatory)

Identification of safety, health and environmental regulations specific for the chemical that is not indicated anywhere else on this SDS.

Chemical Weapons Convention (CWC): This product does not contain any chemicals listed under the CWC schedules of chemicals.

Clean Air Act - Hazardous Air Pollutants (HAP): This product does not contain any chemicals listed within the Hazardous Air Pollutants.

Clean Air Act - Ozone Depleting Substances (ODS): This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpart A, App. A+B).

Clean Water Act - Priority Pollutants (PP): This product does not contain any PP listed under the U.S. Clean Water Act, Section 307 (2)(1) PP List (40 CFR 401.15).

Occupational Safety and Health Act (OSHA): The OSHA Hazard Communication Standard (29 CFR 1910.1200) defines this chemical as C.4.1, C.4.2 & C.4.3 Acute Toxicity - Oral, Dermal & Inhalation: Hazard Category 4. For more information, see Section 2 of this SDS.

Resource Conservation and Recovery Act (RCRA): This product is not considered to be a P- or U-Listed hazardous waste under RCRA (40 CFR 261).

Superfund Amendments and Reauthorization Act (SARA) Title III: Section 302 - Extremely Hazardous Substances (EHS): This product does not contain any chemicals regulated under Section 302 (40 CFR 355) as extremely hazardous substances.

Superfund Amendments and Reauthorization Act (SARA) Title III: Section 304 - CERCLA: This product does not contain any chemicals regulated under Section 304 (40 CFR 302) as hazardous substance(s) for emergency release notification.

Superfund Amendments and Reauthorization Act (SARA) Title III: Section 311/312 - Hazard Communication Standard (HCS): This product is not regulated under Section 3-1-312 (40 CFR 370).

Superfund Amendments and Reauthorization Act (SARA) Title III: Section 313 Toxic Chemical List (TCL): This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).

TSCA Section 5(e) - Consent Order / SNUR: The following chemical(s) are subject to a Section 5(3) Consent Order for Significant New Use Rule (SNUR):

Chemical Name: Ammonium Nitrate

CASRN: 6484-52-2

Percent in Composition: 100%

TSCA Section 8(b) - Inventory Status: The following chemical(s) are subject to TSCA Section 8(b):

Chemical Name: Ammonium Nitrate

CASRN: 6484-52-2

Percent in Composition: 100%

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

Items in red require immediate attention.

Section 16: Other Information

Date of SDS Preparation: October 1, 2013

Revision Date:

Changes from previous version:

Other useful information:

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, expressed or implied, and we assume no responsibility for any damage or expense.