



# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision Date: November 2017

Version: 1.0

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

#### Product Identifier

**Product Name:** Ammonium Nitrate Solution, 90%

**Synonyms:** Liquid Ammonium Nitrate

**Intended Use of the Product** Not available

#### Name, Address, and Telephone of the Responsible Party

##### **Company**

LSB Chemical L.L.C.  
4500 North West Ave.  
P.O. Box 231  
El Dorado, AR 71731  
T (870) 863-1400 - F (870) 863-1126

#### Emergency Telephone Number

**Emergency number** : (870) 863-1400, (800) 424-9300 (CHEMTREC, 24 hours)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Ox. Liq. 3 H272

Eye Irrit. 2A H319

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**



##### **Signal Word (GHS-US)**

: Warning

##### **Hazard Statements (GHS-US)**

: H272 - May intensify fire; oxidizer  
H319 - Causes serious eye irritation

##### **Precautionary Statements (GHS-US)**

: P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.  
P220 - Keep/Store away from combustible materials, clothing, incompatible materials.  
P221 - Take any precaution to avoid mixing with combustibles, organic material, clothing, incompatible materials.  
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P370+P378 - In case of fire: Use appropriate media for extinction.  
P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

#### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

**Unknown Acute Toxicity (GHS-US)** Not available

# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

##### Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Ammonium nitrate	(CAS No) 6484-52-2	90	Ox. Sol. 3, H272 Eye Irrit. 2A, H319
Water	(CAS No) 7732-18-5	10	Not classified

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

#### Description of 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).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

#### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Eye irritation.

**Inhalation:** May cause respiratory irritation.

**Skin Contact:** May cause skin irritation.

**Eye Contact:** Causes serious eye irritation.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Not available

#### Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. Hot Ammonium Nitrate burns skin, allowing rapid absorption of Ammonium Nitrate through the skin and toxic effects can occur quite rapidly. Causes methemoglobinemia – emergency response should treat appropriately.

### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media:** Water spray.

**Unsuitable Extinguishing Media:** Dry chemical, carbon dioxide, or regular foam.

#### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Will burn if exposed to heat, and in addition, will accelerate the burning of other combustibles, resulting in more rapid spread of fire. May intensify fire, oxidizer.

**Explosion Hazard:** Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Smothering, contact with organic material, or combustible material may cause an explosive situation.

**Reactivity:** May cause or intensify fire; oxidizer. May accelerate the burning of other combustible materials. Smothering, contact with organic material, or combustible material may cause an explosive situation.

#### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Nitrogen oxides. Toxic fumes are released. Ammonia.

**Other information:** Do not add water to molten material as this may cause spattering. Do not allow run-off from fire fighting to enter drains or water courses.

# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Reference to Other Sections

Refer to section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Handle in accordance with good industrial hygiene and safety practice. Avoid breathing (vapors, mist, spray). Do not get in eyes, on skin, or on clothing. Keep away from combustible material.

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Ventilate area.

### Environmental Precautions

Prevent entry to sewers and public waters.

### Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill. Do not take up in combustible material such as: saw dust or cellulosic material.

### Reference to Other Sections

See section 8, Exposure Controls and Personal Protection.

## **SECTION 7: HANDLING AND STORAGE**

### Precautions for Safe Handling

**Additional Hazards When Processed:** When heated to decomposition, emits toxic fumes. Smothering, contact with organic material, or combustible material may cause an explosive situation. Do not puncture or incinerate container.

**Handling Temperature:** Should be kept from 71.1°C-107.2°C (160-225°F) to be kept fluid and pumpable. Keep below 204.4°C (400°F), becomes unstable above this temperature.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place. Keep/Store away from combustible materials, extremely high or low temperatures, direct sunlight, ignition sources, incompatible materials. Storage should be designed for the safe release of pressure. Floor drains and recesses should be plugged or eliminated to prevent entrapment of solution.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogens (F, Cl, Br, I). Chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. Organic materials. Combustible materials.

**Storage Temperature:** <204.4°C (400°F) (becomes unstable above this temperature)

**Specific End Use(s)** Not available

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Control Parameters

No additional information available

### Exposure Controls

**Appropriate Engineering Controls:** Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment.

**Personal Protective Equipment:** Protective goggles. Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing.



# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

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

**Skin and Body Protection:** Neoprene, nitrile or PVC gloves and protective clothing recommended.

**Respiratory Protection:** Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

<b>Physical State</b>	: Liquid
<b>Appearance</b>	: Clear
<b>Odor</b>	: Trace odor of ammonia odor
<b>Odor Threshold</b>	: Not available
<b>pH</b>	: 5.5
<b>Relative Evaporation Rate (butylacetate=1)</b>	: Not available
<b>Melting Point</b>	: 70-80.6°C (158-177°F)
<b>Freezing Point</b>	: Not available
<b>Boiling Point</b>	: 132.8-137.8°C (271-280°F)
<b>Flash Point</b>	: Not available
<b>Auto-ignition Temperature</b>	: Not available
<b>Decomposition Temperature</b>	: Not available
<b>Flammability (solid, gas)</b>	: Not available
<b>Lower Flammable Limit</b>	: Not available
<b>Upper Flammable Limit</b>	: Not available
<b>Vapor Pressure</b>	: Not available
<b>Relative Vapor Density at 20 °C</b>	: Not available
<b>Relative Density</b>	: ~1.4@100°C (212°F)
<b>Specific Gravity</b>	: Not available
<b>Solubility</b>	: Complete.
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not available
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Not available

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** May cause or intensify fire; oxidizer. May accelerate the burning of other combustible materials. Smothering, contact with organic material, or combustible material may cause an explosive situation.

**Chemical Stability:** May intensify fire; oxidizer.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame. Combustible materials. Sources of ignition. Incompatible materials.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogens. Chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. Organic materials. Combustible materials.

**Hazardous Decomposition Products:** Nitrogen oxides. Toxic vapors. Ammonia.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified **pH:** 5.5

**Serious Eye Damage/Irritation:** Causes serious eye irritation. **pH:** 5.5

# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

### Information on Toxicological Effects - Ingredient(s)

#### **LD50 and LC50 Data:**

<b>Water (7732-18-5)</b>	
LD50 Oral Rat	> 90000 mg/kg
<b>Ammonium nitrate (6484-52-2)</b>	
LD50 Oral Rat	2217 mg/kg
LC50 Inhalation Rat (mg/l)	> 88.8 mg/l/4h

## **SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity** Not classified

### **Persistence and Degradability**

<b>Liquid Ammonium Nitrate 90%</b>	
Persistence and Degradability	Not established.

### **Bioaccumulative Potential**

<b>Liquid Ammonium Nitrate 90%</b>	
Bioaccumulative Potential	Not established.

<b>Ammonium nitrate (6484-52-2)</b>	
BCF fish 1	(no bioaccumulation expected)
Log Pow	-3.1 (at 25 °C)

**Mobility in Soil** Not available

### **Other Adverse Effects**

**Other Information:** Avoid release to the environment.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Additional Information:** Clean up even minor leaks or spills if possible without unnecessary risk.

# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 14: TRANSPORT INFORMATION

#### 14.1 In Accordance with DOT

**Proper Shipping Name** : AMMONIUM NITRATE, LIQUID (*hot concentrated solution*)  
**Hazard Class** : 5.1  
**Identification Number** : UN2426  
**Label Codes** : 5.1  
**ERG Number** : 140



#### 14.2 In Accordance with IMDG

**Proper Shipping Name** : AMMONIUM NITRATE, LIQUID (*hot concentrated solution*)  
**Hazard Class** : 5.1  
**Identification Number** : UN2426  
**Label Codes** : 5.1  
**EmS-No. (Fire)** : F-H  
**EmS-No. (Spillage)** : S-Q



#### 14.3 In Accordance with IATA

**Proper Shipping Name** : AMMONIUM NITRATE, LIQUID (*hot concentrated solution*)  
**Identification Number** : UN2426  
**Hazard Class** : 5  
**Label Codes** : 5.1  
**ERG Code (IATA)** : 5L



#### 14.4 In Accordance with TDG

**Proper Shipping Name** : AMMONIUM NITRATE, LIQUID (*hot concentrated solution*)  
**Hazard Class** : 5.1  
**Identification Number** : UN2426  
**Label Codes** : 5.1



### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

##### Liquid Ammonium Nitrate 90%

<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Reactive hazard
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##### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

##### Ammonium nitrate (6484-52-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### US State Regulations

##### Ammonium nitrate (6484-52-2)

U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List

# Ammonium Nitrate Solution, 90%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

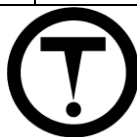
U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

### Canadian Regulations

#### Liquid Ammonium Nitrate 90%

WHMIS Classification Class C - Oxidizing Material  
Class D Division 2 Subdivision B - Toxic material causing other toxic effects



#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

#### Ammonium nitrate (6484-52-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification Class C - Oxidizing Material  
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## SECTION 16: OTHER INFORMATION

**Revision date** : November 2017

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

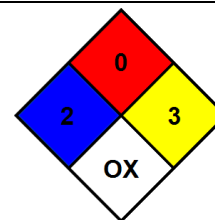
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Ox. Liq. 3	Oxidizing liquids Category 3
Ox. Sol. 3	Oxidizing solids Category 3
H272	May intensify fire; oxidizer
H319	Causes serious eye irritation

**NFPA Health Hazard** : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA Fire Hazard** : 0 - Materials that will not burn.

**NFPA Reactivity** : 3 - Capable of detonation or explosive reaction, but requires a strong initiating source or must be heated under confinement before initiation, or reacts explosively with water.

**NFPA Specific Hazard** : OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



### Party Responsible for the Preparation of This Document

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*