



# Ammonium Nitrate Solution, 83%

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 01/30/2020

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Supersedes Date: 01/30/2020

Version: 2.2

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Ammonium Nitrate Solution, 83%

**Synonyms:** Liquid Ammonium Nitrate

**1.2. Intended Use of the Product** Fertilizer

**1.3. 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

**1.4. Emergency Telephone Number**

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

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US/CA Classification

Ox. Liq. 3 H272

Eye Irrit. 2A H319

Full text of hazard classes and H-statements : see section 16

### 2.2. Label Elements

#### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :



**Signal Word (GHS-US/CA)** :

Warning

**Hazard Statements (GHS-US/CA)** :

H272 - May intensify fire; oxidizer.

H319 - Causes serious eye irritation.

**Precautionary Statements (GHS-US/CA)** :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 - Keep away from combustible materials, clothing, and 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, and 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 (see section 5) to extinguish.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Ammonium nitrate	Liquid ammonium nitrate/ Ammonium(I) nitrate (1:1) / Nitric acid, ammonium salt.	(CAS-No.) 6484-52-2	83	Ox. Sol. 3, H272 Eye Irrit. 2A, H319
Water	AQUA / Aqua	(CAS-No.) 7732-18-5	17	Not classified

Full text of H-phrases: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

### SECTION 4: FIRST AID MEASURES

#### 4.1. 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:** Immediately remove contaminated clothing. Immediately drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Immediately rinse with water for at least 15 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. Immediately obtain medical attention.

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

**General:** Causes serious eye irritation.

**Inhalation:** Prolonged exposure may cause respiratory irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

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

**Chronic Symptoms:** Overexposure to this material may result in methemoglobinemia. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

#### 4.3. 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, such as by intravenous administration of methylene blue in addition to thermal burn treatment. If medical advice is needed, have product container or label at hand.

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, fog (flooding amounts).

**Unsuitable Extinguishing Media:** Dry chemical, carbon dioxide, or regular foam. Do not use any method of extinguishing a fire that smothers. In molten state: reacts violently with water (moisture).

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

**Fire Hazard:** May intensify fire; oxidizer. Will burn if mixed or contaminated with combustible materials and exposed to heat. In addition, will accelerate the burning of other combustibles, resulting in more rapid spread of fire. Will not spontaneously combust. However, spontaneous ignition at moderately elevated temperatures may occur when contaminated with oxidizable materials such as oil, diesel fuel, wood, seed, charcoal, sulfur, finely divided metals, or other combustible substances.

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

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

### 5.3. 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. If structure containing Ammonium Nitrate is fully engulfed in flames, DO NOT fight fire. Evacuate surrounding area for at least 1/2 mile radius.

**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. Never seal off or close building doors or compartments when fire occurs.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing. Avoid breathing (vapor, mist, spray). Keep away from combustible material. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

#### 6.1.1. For Non-Emergency Personnel

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

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

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

**Emergency Procedures:** Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Use only non-sparking tools.

**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. Transfer spilled material to a suitable container for disposal.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** When heated to decomposition, emits toxic fumes. Confinement, smothering, contact with organic material, or combustible material may cause an explosive situation. Do not puncture or incinerate container. May cause or intensify fire; oxidizer. NO SMOKING near this material.

**Precautions for Safe Handling:** Do not get in eyes, on skin, or on clothing. Avoid breathing vapors, mist, spray. Keep away from heat, sparks, open flames, hot surfaces, combustible materials, incompatible materials - No smoking. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**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.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

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

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**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. 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.

### 7.3. Specific End Use(s)

Fertilizer

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed.

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



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

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

**Eye and Face Protection:** Chemical safety 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. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known, wear approved respiratory protection.

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

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear
Odor	: Trace odor of ammonia
Odor Threshold	: Not available
pH	: 4.5 - 6.0
Evaporation Rate	: Not available
Melting Point	: 70 - 80.6 °C (158 - 177 °F)
Freezing Point	: Not available
Boiling Point	: 132.8 - 137.8 (271-280°F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available

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Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Relative Density	: ~ 1.4 @100°C (212°F)
Specific Gravity	: Not available
Solubility	: Complete.
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Oxidizing Properties	: Oxidizing liquid 3 - May intensify fire;oxidizer.

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:** May cause or intensify fire; oxidizer. May accelerate the burning of other combustible materials. Confinement, smothering, contact with organic material, or combustible material may cause an explosive situation. Oxidizer: increases the burning rate of combustible materials.

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

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

**10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.

**10.5. 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.

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

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified

**pH:** 4.5 - 6.0

**Eye Damage/Irritation:** Causes serious eye irritation.

**pH:** 4.5 - 6.0

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**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:** Prolonged exposure may cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

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

**Chronic Symptoms:** Overexposure to this material may result in methemoglobinemia. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

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

**LD50 and LC50 Data:**

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

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecology - General: Not classified.

Ammonium nitrate (6484-52-2)	
LC50 Fish 1	542 mg/l
EC50 Daphnia 1	555 mg/l

### 12.2. Persistence and Degradability

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Persistence and Degradability	Not established.

### 12.3. Bioaccumulative Potential

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Bioaccumulative Potential	Not established.

Ammonium nitrate (6484-52-2)	
BCF Fish 1	(no bioaccumulation expected)
Log Pow	-3.1 (at 25 °C)

12.4. Mobility in Soil Not available

### 12.5. Other Adverse Effects

Other Information: Avoid release to the environment. Ammonium nitrate is a plant nutrient. However, large spills may kill vegetation and fish and cause algae blooms if waterways are contaminated.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Additional Information: Clean up even minor leaks or spills if possible without unnecessary risk. Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 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*)  
Hazard Class : 5.1  
Identification Number : UN2426  
ERG Code (IATA) : 5L

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### 14.4. In Accordance with TDG

**Proper Shipping Name** : AMMONIUM NITRATE, LIQUID (hot concentrated solution) with not more than 0.2 per cent combustible material, in a concentration exceeding 80 per cent

**Hazard Class** : 5.1

**Identification Number** : UN2426

**Label Codes** : 5.1



## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

<b>Ammonium Nitrate Solution, 83%</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Physical hazard - Oxidizing Agent Health hazard - Serious eye damage or eye irritation
<b>Ammonium nitrate (6484-52-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. US State Regulations

<b>Ammonium nitrate (6484-52-2)</b>
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

### 15.3. Canadian Regulations

<b>Ammonium nitrate (6484-52-2)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Water (7732-18-5)</b>
Listed on the Canadian DSL (Domestic Substances List)

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 01/30/2020

### Revision

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

### GHS Full Text Phrases:

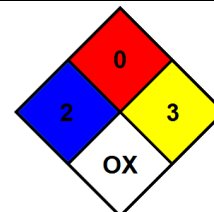
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Ox. Liq. 3	Oxidizing liquids Category 3
Ox. Sol. 3	Oxidizing solids Category 3
H272	May intensify fire; oxidizer
H319	Causes serious eye irritation

**NFPA Health Hazard** : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

**NFPA Fire Hazard** : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

**NFPA Reactivity Hazard** : 3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.

**NFPA Specific Hazards** : OX - Materials that possess oxidizing properties.



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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.*

NA GHS SDS 2015 (Can, US)