

**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) and their amendments.

**Ammonium Nitrate Solution, 50%**

SDS Number: LSB-ANW-NA-EN

**Section 1: IDENTIFICATION**

<b>Product Name:</b>	Ammonium Nitrate Solution, 50%
<b>Synonyms:</b>	Liquid Nitrogen Fertilizer.
<b>Product Use:</b>	Fertilizer.
<b>Restrictions on Use:</b>	Not available.
<b>Manufacturer/Supplier:</b>	LSB Chemical, LLC 3503 NW 63rd Street Suite 500 Oklahoma, OK 73116
<b>Website:</b>	<a href="http://www.lsbindustries.com">www.lsbindustries.com</a>
<b>Email:</b>	<a href="mailto:lsbproductsupport@lsbindustries.com">lsbproductsupport@lsbindustries.com</a>
<b>Phone Number:</b>	(405) 235-4546
<b>Emergency Phone:</b>	24 Hour Emergency Telephone Number: 1-800-424-9300 (CHEMTREC)
<b>Date of Preparation of SDS:</b>	November 13, 2024

**Section 2: HAZARD(S) IDENTIFICATION****GHS INFORMATION**

**Classification:** Oxidizing Liquids, Category 3  
Eye Irritation, Category 2A

**LABEL ELEMENTS****Hazard****Pictogram(s):****Signal Word:** Warning

**Hazard Statements:** H272: May intensify fire; oxidizer.  
H319: Causes serious eye irritation.

**Precautionary Statements**

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

P220: Keep away from clothing and other combustible materials.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves, protective clothing, eye protection and face protection.

**Response:** 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 attention.  
P370 + P378: In case of fire use: Use water.

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**Storage:** Not applicable.**Disposal:** P501: Dispose of contents and container in accordance with applicable regional, national and local laws and regulations.**Hazards Not Otherwise Classified:** Not applicable.**Ingredients with Unknown Toxicity:** None.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations.

**Section 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Nitric acid ammonium salt (1:1)	Ammonium nitrate	6484-52-2	50 - 60
<b>Hazardous Ingredient(s)</b>			
Water	H2O	7732-18-5	40 - 50

**Section 4: FIRST-AID MEASURES****Inhalation:** If inhaled: Call a poison center or doctor if you feel unwell.**Acute and delayed symptoms and effects:** May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.**Eye Contact:** If in eyes: Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. In case of eye contact with hot product: Immediately call a poison center or doctor.**Acute and delayed symptoms and effects:** Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact.**Skin Contact:** If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. In case of skin contact with hot product: Immediately call a poison center or doctor.**Acute and delayed symptoms and effects:** May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact.**Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If hot product is swallowed: Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical

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personnel. Never give anything by mouth to an unconscious person.

**Acute and delayed symptoms and effects:** Hot product may cause thermal burns. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

**Note to Physicians:** Symptoms may not appear immediately.

**Section 5: FIRE-FIGHTING MEASURES****FLAMMABILITY AND EXPLOSION INFORMATION**

May intensify fire; oxidizer. These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May explode from heat or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, oil, clothing, etc.). Containers may explode when heated. Runoff may create fire or explosion hazard.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**Sensitivity to Mechanical Impact:** This material is not sensitive to mechanical impact.

**Sensitivity to Static Discharge:** This material is not sensitive to static discharge.

**MEANS OF EXTINCTION**

**Suitable Extinguishing Media:** Small Fire: Use water.

Large Fire: Flood fire area with water from a distance. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do it without risk.

**Unsuitable Extinguishing Media:** Do not use dry chemicals or foams. CO2 or Halon® may provide limited control.

**Products of Combustion:** Oxides of nitrogen.

**Protection of Firefighters:** Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection.

**Section 6: ACCIDENTAL RELEASE MEASURES**

**Emergency Procedures:** As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet). Keep

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unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

**Personal Precautions:** Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8.

**Environmental Precautions:** Not normally required.

**Methods for Containment:** Stop leak if you can do it without risk. Do not get water inside containers.

**Methods for Clean-Up:** Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Do not take up in combustible material such as: saw dust or cellulosic material.

**Other Information:** See Section 13 for disposal considerations.

**Section 7: HANDLING AND STORAGE****Handling:**

Do not swallow. Do not breathe mist, vapours, or spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. See Section 8 for information on Personal Protective Equipment.

**Storage:**

Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

**Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines****Component**

Ammonium nitrate [CAS No. 6484-52-2]

**ACGIH:** 10 mg/m<sup>3</sup> (TWA) (Inhalable.); 3 mg/m<sup>3</sup> (TWA) (Respirable.); For Particles (Insoluble or Poorly Soluble) Not Otherwise Specified

**OSHA:** 15 mg/m<sup>3</sup> (Total dust) (TWA), 5 mg/m<sup>3</sup> (Respirable fraction) (TWA); For Particulates Not Otherwise Regulated (PNOR).

Water [CAS No. 7732-18-5]

**ACGIH:** No TLV established.

**OSHA:** No PEL established.

**PEL:** Permissible Exposure Limit

**TLV:** Threshold Limit Value

**TWA:** Time-Weighted Average

**Engineering Controls:** Use explosion-proof electrical, ventilating, and lighting equipment.

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**PERSONAL PROTECTIVE EQUIPMENT (PPE)****Eye/Face Protection:**

Wear chemical safety goggles. If product is hot, wear full face-shield. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3:20 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

**Hand Protection:**

Wear protective gloves. If product is hot, thermally protective gloves are recommended. Consult manufacturer specifications for further information.

**Skin and Body Protection:**

Wear protective clothing, chemical resistant clothing.

**Respiratory Protection:**

If ventilation is inadequate, then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-18, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

**General Hygiene Considerations:**

Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear liquid.
<b>Colour:</b>	Colourless.
<b>Odour:</b>	Trace of ammonia odour.
<b>Odour Threshold:</b>	Not available.
<b>Physical State:</b>	Liquid.
<b>pH:</b>	6.5 to 7.5
<b>Melting Point / Freezing Point:</b>	1.11 to 19.44°C (34 to 67 °F)
<b>Initial Boiling Point:</b>	Not available.
<b>Boiling Range:</b>	108.9 °C (228 °F)
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not available.

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<b>Flammability:</b>	May intensify fire; oxidizer. These substances will accelerate burning when involved in a fire. See Section 5.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Relative Vapor Density:</b>	Not available.
<b>Relative Density:</b>	~ 1.20 at 15.56 °C (60 °F)
<b>Solubility:</b>	Completely soluble in water.
<b>Partition Coefficient: n-Octanol/Water:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Decomposition Temperature:</b>	Not available.
<b>Kinematic Viscosity:</b>	Not available.
<b>Percent Volatile, wt. %:</b>	Not available.
<b>VOC content, wt. %:</b>	Not available.
<b>Density:</b>	Not available.
<b>Coefficient of Water/Oil Distribution:</b>	Not available.
<b>Particle Characteristics:</b>	Not available.

**Section 10: STABILITY AND REACTIVITY**

<b>Reactivity:</b>	Contact with incompatible materials. Exposure to heat. Oxidizer: increases the burning rate of combustible materials.
<b>Chemical Stability:</b>	Stable under normal storage conditions. Oxidizer: increases the burning rate of combustible materials.
<b>Possibility of Hazardous Reactions:</b>	None known.
<b>Conditions to Avoid:</b>	Contact with incompatible materials. Sources of ignition. Exposure to heat.
<b>Incompatible Materials:</b>	Acids. Reducers. Powdered metals. Combustible materials. Flammable liquid. Hydrogen sulphide. Chlorates. Carbon steel. Copper. Copper alloys.
<b>Hazardous Decomposition Products:</b>	Not available.

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**Section 11: TOXICOLOGICAL INFORMATION****EFFECTS OF ACUTE EXPOSURE****Product Toxicity**

**Oral:** Not available.

**Dermal:** Not available.

**Inhalation:** Not available.

**Component Toxicity**

Component	CAS No.	LD <sub>50</sub> oral	LD <sub>50</sub> dermal	LC <sub>50</sub>
Ammonium nitrate	6484-52-2	2217 mg/kg (rat)	> 5000 mg/kg (rat)	> 88.8mg/L (rat); 4H

**Likely Routes of Exposure:** Eye contact. Skin contact. Inhalation. Ingestion.

**Target Organs:** Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood.

**Symptoms (including delayed and immediate effects)**

**Inhalation:** May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Eye:** Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact.

**Skin:** May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact.

**Ingestion:** Hot product may cause thermal burns. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Skin Sensitization:** Not available.

**Respiratory Sensitization:** Not available.

**Medical Conditions** Not available.

**Aggravated By Exposure:**

**EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)**

**Target Organs:** Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood.

**Chronic Effects:** Prolonged or repeated contact may dry skin and cause irritation.

**Carcinogenicity:** This product does not contain any carcinogens or potential carcinogens above reportable thresholds as listed by ACGIH, IARC, OSHA, or NTP.

**Mutagenicity:** Not available.

**Reproductive Effects:** Not available.

**Developmental Effects**

**Teratogenicity:** Not available.

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**Embryotoxicity:** Not available.**Toxicologically Synergistic Materials:** Not available.**Section 12: ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	<b>Ammonium nitrate (CAS No. 6484-52-2):</b> Fish: LC50 = 542 mg/L; Crustacea: EC50 = 555 mg/L.
<b>Persistence / Degradability:</b>	Not available.
<b>Bioaccumulation / Accumulation:</b>	log Pow = -3.1 at 25 °C (77 °F)
<b>Mobility in Environment:</b>	Not available.
<b>Other Adverse Effects:</b>	Not available.

**Section 13: DISPOSAL CONSIDERATIONS**

<b>Disposal Instructions:</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.
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**Section 14: TRANSPORT INFORMATION****U.S. Department of Transportation (DOT)****Proper Shipping Name:** UN2426, AMMONIUM NITRATE, LIQUID, 5.1**Class:** 5.1**UN Number:** UN2426**Packing Group:** Not applicable.**Placard(s):****ERG Guide:** 140**Canada Transportation of Dangerous Goods (TDG)****Proper Shipping Name:** UN2426, AMMONIUM NITRATE, LIQUID, 5.1**Class:** 5.1**UN Number:** UN2426**Packing Group:** Not applicable.**Placard(s):****ERG Guide:** 140

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**Section 15: REGULATORY INFORMATION****Chemical Inventories****US (TSCA)**

The components of this product are in compliance with the chemical notification requirements of TSCA.

**Canada (DSL)**

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

**Federal Regulations****United States**

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SARA Title III**

No components are listed.

**State Regulations****Massachusetts**

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Ammonium nitrate	6484-52-2	Listed.

**New Jersey**

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Ammonium nitrate	6484-52-2	SHHS

**Note:** SHHS = Special Health Hazard Substance

**Pennsylvania**

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Ammonium nitrate	6484-52-2	E

**Note:** E = Environmental Hazard

**California**

**California Prop 65:** This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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**Section 16: OTHER INFORMATION****Disclaimer:**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Any party handling, transferring, transporting, storing, applying or otherwise using this product should review thoroughly all applicable laws, rules, regulations, standards and good engineering practices. Such thorough review should occur before the party handles, transfers, transports, stores, applies or otherwise uses this product.

**Date of Preparation of SDS:** January 26, 2026

**Version:** 1.0

**GHS SDS Prepared by:** Aegis Regulatory Inc.

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