

**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.

Urea Solution

SDS Number: LSB-UREA-NA-EN

Section 1: IDENTIFICATION

Product Name:	Urea Solution
Synonyms:	Liquid Nitrogen Fertilizer.
Product Use:	Fertilizer.
Restrictions on Use:	Not available.
Manufacturer/Supplier:	LSB Chemical, LLC 3503 NW 63rd Street Suite 500 Oklahoma, OK 73116
Website:	www.lsbindustries.com
Email:	lsbproductsupport@lsbindustries.com
Phone Number:	(405) 235-4546
Emergency Phone:	24 Hour Emergency Telephone Number: 1-800-424-9300 (CHEMTREC)
Date of Preparation of SDS:	January 15, 2026

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

Classification: Skin Irritation, Category 2
Eye Irritation, Category 2A

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word: Warning

Hazard H315: Causes skin irritation.

Statements: H319: Causes serious eye irritation.

Precautionary Statements

Prevention: P264: Wash hands thoroughly after handling.

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

Response: P302 + P352: IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313: If skin irritation occurs: Get medical attention.

P337 + P313: If eye irritation persists: Get medical attention.

P362 + P364: Take off contaminated clothing and wash it before reuse.

Storage: Not applicable.

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Disposal: Not applicable.

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.
Urea	Not available.	57-13-6	48 - 52
Ammonia	Not available.	7664-41-7	0.5 - 1
Imidodicarbonic diamide	Biuret	108-19-0	< 0.5

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.

Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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.

Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: If swallowed: Call a poison center or doctor if you feel unwell. 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 personnel. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: 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.

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

Not flammable or combustible by OSHA/WHMIS criteria. May burn at high temperatures.

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: Dry chemical, CO₂, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Do not use straight streams.

Products of Combustion: Oxides of carbon. Oxides of nitrogen. Ammonia.

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). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways.

Methods for Containment: Stop leak if without risk. Do not flush to sewer or allow to enter waterways.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Other Information: See Section 13 for disposal considerations.

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

Do not swallow. 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**

Urea [CAS No. 57-13-6]

ACGIH: No TLV established.**OSHA:** No PEL established.

Ammonia [CAS No. 7664-41-7]

ACGIH: 25 ppm (TWA); 35 ppm (STEL); (1976);**OSHA:** 50 ppm (TWA), 35 mg/m³ (TWA);
35 ppm (STEL) [Vacated];

Biuret [CAS No. 108-19-0]

ACGIH: No TLV established.**OSHA:** No PEL established.**PEL:** Permissible Exposure Limit**TLV:** Threshold Limit Value**TWA:** Time-Weighted Average**STEL:** Short-Term Exposure Limit**Engineering Controls:**

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

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

Wear chemical safety goggles. 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. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing, chemical resistant clothing.

Respiratory Protection:

If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits 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.

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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

Appearance:	Clear liquid.
Color:	Colorless.
Odor:	Slight ammonia.
Odor Threshold:	Not available.
Physical State:	Liquid.
pH:	7 to 9
Melting Point / Freezing Point:	16.7 °C (62 °F)
Initial Boiling Point:	Not available.
Boiling Range:	115.6 to 132.2 °C (240 to 270 °F)
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	90 mmHg at 37.8 °C (100 °F)
Relative Vapor Density:	Not available.
Relative Density:	1.2 to 1.3 (Water = 1)
Solubility:	Not available.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Kinematic Viscosity:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

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Particle Characteristics: Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Exposure to heat.

Chemical Stability: Stable under normal storage conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Contact with incompatible materials. Exposure to heat.

Incompatible Materials: Strong acids. Strong oxidizers.

Hazardous Decomposition Products: Not available.

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 ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Urea	57-13-6	8471 mg/kg (rat)	Not available.	Not available.
Ammonia	7664-41-7	Not available.	7000 mg/kg (rabbit)	2000 ppm (rat); 4H
Biuret	108-19-0	Not available.	Not available.	Not available.

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.

Skin: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: 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:

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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.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: **Urea (CAS No. 57-13-6):**
Poecilia reticulata: LC50 = 16200 - 18300 mg/L, 96 hr;
Daphnia magna: EC50 = 3910 mg/L, 48 hr, static.

Ammonia (CAS No. 7664-41-7):
Cyprinus carpio: LC50 = 0.44 mg/L, 96 hr;
Daphnia magna: EC50 = 25.4 mg/L, 48 hr;
Lepomis macrochirus: LC50 = 0.26 to 4.6 mg/L, 96 hr;

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: **Urea (CAS No. 57-13-6):**
BCF <10
log Pow = -1.59 at 25 °C (77 °F)

Ammonia (CAS No. 7664-41-7):
log Pow = -1.14 at 25 °C (77 °F)

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: 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: Not applicable.
Class: Not applicable.
UN Number: Not applicable.
Packing Group: Not applicable.
Placard(s): Not applicable.
ERG Guide: Not applicable.

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: Not applicable.
Class: Not applicable.
UN Number: Not applicable.
Packing Group: Not applicable.
Placard(s): Not applicable.
ERG Guide: Not applicable.

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

Ammonia

CAS No.

7664-41-7

RTK List

E

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Note: E = Extraordinarily Hazardous Substance

New Jersey

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

Component

Ammonia

CAS No.

7664-41-7

RTK List

SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

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

Component

Ammonia

CAS No.

7664-41-7

RTK List

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.

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 15, 2026

Version: 1.1

GHS SDS Prepared by: Aegis Regulatory Inc.

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