

## SAFETY DATA SHEET

# LITHIUM NITRATE SOLUTION

### Section 1 – Identification

|                           |                                         |                                 |
|---------------------------|-----------------------------------------|---------------------------------|
| Product                   | Lithium Nitrate Solution                | Recommended Use:                |
|                           |                                         | Various industrial applications |
| Manufacturer              | TradeMark Nitrogen Corp.                |                                 |
| Address                   | 1216 Old Hopewell Road, Tampa, FL 33619 |                                 |
| Phone                     | (813) 626-1181                          |                                 |
| 24 Hour Emergency Contact | Chemtrec<br>(800) 424-9300              |                                 |

### Section 2 – Hazard Identification



GHS07

Signal Word: **WARNING**

#### Hazard Statements

- H302 Harmful if swallowed
- H319 Causes serious eye irritation

#### Precautionary Statements:

- P101: If medical advice is needed, have product container or label at hand.
- P102: Keep out of reach of children.
- P103 Read label before use
- P210 Keep away from open flames. - No Smoking
- P260 Do not breathe fume, mist, spray, vapours
- P264 Wash hands thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P271 Use only outdoors or in a well-ventilated area
- P280 Wear eye protection, protective clothing, protective gloves
- P331 Do NOT induce vomiting
- P301+P330 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell
- P302+P352 IF ON SKIN: Wash with plenty of water
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- 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 advice / attention
- P337+P313 If eye irritation persists: Get medical advice / attention
- P362 Take off contaminated clothing
- P501 Dispose of contents / container according to local, regional, national, and international regulations

### Section 3 – Composition

| Ingredients | Component                            | CAS. No.  | Percent by Weight |
|-------------|--------------------------------------|-----------|-------------------|
|             | Lithium Nitrate<br>LiNO <sub>3</sub> | 7790-69-4 | 30.00%            |
|             | Water (H <sub>2</sub> O)             | 7732-18-5 | Balance           |

#### Section 4 – First Aid Measures

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                    | If inhaled: Remove person to fresh air and keep comfortable for breathing. Provide artificial respiration if necessary. Seek medical attention if necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Skin Contact                  | If on skin (or hair): Take off all contaminated clothing. Rinse skin with soap and water for at least 15 minutes. Seek medical attention if irritation persists. Wash contaminated clothing before reuse.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Eye Contact                   | If in eyes: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention if irritation persists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Ingestion                     | If swallowed: Do NOT induce vomiting. Drink large amounts of water. Never give anything by mouth to an unconscious person. Seek medical attention. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Lithium poisoning may occur and produce symptoms such as difficulty speaking, drowsiness, twitching, visual disturbances, tremors, dehydration, electrolyte imbalance, mental confusion, and in extreme case of ingestion, cardiac disturbances, convulsions and coma. As a nitrate compound, this product may cause methemoglobinemia (a condition in which the oxygen-carrying capacity of the blood is adversely impacted.) upon ingestion characterized by cyanosis, headache, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, coma and rarely death.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Acute Health Hazards          | High levels of nitrates may reduce the blood's ability to transport oxygen causing headache, fatigue, dizziness and blue lips and skin (methemoglobinemia). Moderate irritant of eyes, skin, mucous membranes, and contaminated tissue. Ingestion can be harmful and rarely fatal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Chronic Health Hazards        | Methemoglobinemia is the primary health effect. Prolonged skin contact may result in dermatitis (inflammation and redness of skin). Repeated ingestion of small amounts may cause weakness, depression, headaches, neurological effects and mental impairment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| First Aid: Notes to Physician | <p>Antidote: The following antidote is recommended for lithium poisoning and treatment. The decision as to the severity of poisoning requires administration of any antidote, and actual dose required should be made by qualified medical personnel.</p> <p>NITRATE POISONING: 1) Emergency measures: Delay absorption of ingested nitrates by giving milk, water or activated charcoal and then remove by gastric lavage or emesis. Remove poison from skin by scrubbing with soap and water. 2) General measures: Treat methemoglobinemia with dyspnea by methylene blue injection.</p> <p>LITHIUM POISONING: 1) In single ingestion episodes, give syrup of ipecac and/or perform gastric lavage if productive vomiting has not already occurred. 2) Fluid electrolyte replacement for the correction of dehydration and acid-base imbalances. Over hydration may precipitate pulmonary edema. 3) Infusion of urea or mannitol, alkalization of the urine, and aminophylline increase lithium excretion in patients with good renal function. 4) Extracorporeal or peritoneal hemodialysis to decrease lithium levels and control uremia in severe intoxications. If a massive overdose is known with certainty to have been ingested, it may be prudent to institute these measures even in the absence of positive clinical findings because of severe delayed toxicity. 5) Diazepam for the suppression of abnormal motor activity. 6) Support treatment for central nervous depression. 7) Frequent electrocardiograms to assess cardiac status (Groleau, Smith, Hodge-Clinical Toxicology of Commercial Products, Fifth Edition)</p> <p>Activated charcoal does not bind lithium effectively and is not useful in isolated lithium toxicity. (Groleau, Lithium Toxicity, Emergency Medicine Clinics of North America, Volume 12, Number 2, May, 1994)</p> <p>Raising the sodium intake does not increase lithium clearance (Thomassen, K. Renal lithium elimination in man and active treatment of lithium poisoning. Acta Psychiatr. Scand., Suppl. No. 207:83-84, 1969)</p> |

#### Section 5 – Fire Fighting Measures

|                                               |                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Extinguishing Techniques & Equipment | This product is an aqueous solution which will not burn. However, if evaporated to dryness this product is an oxidizer and can sustain combustion. Not combustible or reactive, but can contribute to the intensity of the fire. Water spray is recommended. Foam, dry chemical, CO2 or water fog. Wear self-contained breathing apparatus and full protective gear. |
| Chemical Hazards From Fire                    | Thermal decomposition products may include irritating vapors and toxic gases including oxides of lithium and nitrogen. If heated to evaporation, this product may evolve oxygen and increase fire hazard.                                                                                                                                                            |
| Special Fire Fighting Procedures              | Use extinguishing agent most appropriate to surrounding materials.                                                                                                                                                                                                                                                                                                   |
| NFPA Rating                                   | Health - 1 (Slight)<br>Fire - 0 (Least)<br>Reactivity - 1 (Slight)                                                                                                                                                                                                                                                                                                   |
| Other                                         | Do not allow run-off from fire fighting to enter drains or water courses.                                                                                                                                                                                                                                                                                            |



#### Section 6 – Accidental Release Measure

|                      |                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal Precautions | Avoid splashing. Prevent exposure to spilled material with the use of proper PPE.                                                                                                                                                                                                                                                               |
| Protective Equipment | PPE should include gloves, goggles and protective clothing.                                                                                                                                                                                                                                                                                     |
| Containment          | Stop the flow of material, if this is without risk. Wear appropriate protective equipment and clothing during clean-up. Contain the discharged material and dike the spilled material where possible. Prevent entry into sewers, drains, underground or confined spaces, water intakes and waterways. Avoid contact with combustible materials. |
| In Case of Spill     | Absorb product with inert absorbent. Avoid splashing or spraying. Contain and pick up spill in diked area. Prevent discharge to sewers or water ways. If uncontaminated, recover and re-use.                                                                                                                                                    |

## Section 7 – Safe Handling & Storage

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for Safe Handling & Storage | Keep formation of airborne mists to a minimum. Containers should be kept closed and properly labeled. Open container carefully, as needed to relieve any build up of pressure. Do not get this material in your eyes, on your skin, or on your clothing. Do not inhale vapors or mists of this product. Use this product with adequate ventilation. Wash thoroughly after handling.<br><br>Store in a cool, dry area. Do not freeze. Store away from direct sunlight and any sources of heat. Empty product containers may contain product residue. Do not reuse empty containers. Do not store this material in open or unlabeled containers. |
| Incompatibility                         | Flammable and comustible materials, strong reducing agents and strong acids, finely powdered metals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Section 8 – Exposure Controls / Personal Protection

|                               |                                                                                                                                                                                                                                                    |                                                                                                     |                                                                                   |                                                                                   |                                         |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------|
| Exposure Limits               | Component                                                                                                                                                                                                                                          | Permissible Exposure Limit                                                                          | Threshold Limit Value                                                             | Short Term Exposure Limit                                                         | Immediately Dangerous to Life or Health |
|                               | Lithium Nitrate<br>LiNO <sub>3</sub>                                                                                                                                                                                                               | Not Established                                                                                     | Not Established                                                                   | Not Established                                                                   | Not Established                         |
|                               | Water (H <sub>2</sub> O)                                                                                                                                                                                                                           | Not Established                                                                                     | Not Established                                                                   | Not Established                                                                   | Not Established                         |
| Engineering Controls          | Local or general exhaust. Eyewash and emergency shower facilities should be available. Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. |                                                                                                     |                                                                                   |                                                                                   |                                         |
| Personal Protective Equipment | Eyes                                                                                                                                                                                                                                               | Chemical safety goggles or safety glasses.                                                          |                                                                                   |                                                                                   |                                         |
|                               | Hands                                                                                                                                                                                                                                              | Impervious chemical protective gloves.                                                              |                                                                                   |                                                                                   |                                         |
|                               | Respiratory                                                                                                                                                                                                                                        | None required under normal conditions. NIOSH approved respirator if there is a mist of the product. |                                                                                   |                                                                                   |                                         |
|                               | Protective Clothing                                                                                                                                                                                                                                |                                                                                                     |                                                                                   |                                                                                   |                                         |
|                               |                                                                                                                                                                   |                    |  |  |                                         |
|                               | Gloves                                                                                                                                                                                                                                             | Protective Clothing                                                                                 | Goggles                                                                           | Respiratory Protection                                                            |                                         |

## Section 9 – Physical & Chemical Properties

|                     |                                        |                     |                       |
|---------------------|----------------------------------------|---------------------|-----------------------|
| Appearance and Odor | Clear to slight yellow                 | Specific Gravity    | 1.195 - 1.205         |
| Boiling Point       | > 212°F (>100°C at 1 atmosphere)       | Molecular Weight    | 68.95                 |
| Freezing Point      | < 32°F (estimated around 14°F (-10°C)) | Solubility in Water | Very soluble in water |
| Vapor Pressure      | No Data Available                      | Flash Point         | Not flammable         |
| Weight per Gallon   | 10.01 lbs/gal @ 68°F                   | pH                  | 7 - 10 (1:6 ratio)    |
| Gallons per Ton     | 199.8                                  | Salt-Out Temp       | No Data Available     |
| Flammability Limits | No Data Available                      | Auto Ignition Temp  | Not Flammable         |
| UEL                 | No Data Available                      | LEL                 | No Data Available     |

## Section 10 – Stability & Reactivity

|                                  |                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Reactivity                       | Product is not reactive under normal conditions. Avoid interaction with heat (flames), oxidizers, acids or alkalis.   |
| Stability                        | Product is stable under normal conditions.                                                                            |
| Hazardous Reactions              | None known. Hazardous polymerization will not occur.                                                                  |
| Conditions to Avoid              | Keep away from direct heat sources. Avoid heating within a confined space. Avoid incompatibilities and contamination. |
| Incompatible Materials           | Strong reducing agents, flammable or combustible materials, powdered metals.                                          |
| Hazardous Decomposition Products | Decomposition may yield carbon monoxide, carbon dioxide, oxides of lithium and nitrogen.                              |

## Section 11 – Toxicology Information

|                                |                                                                                                                                |                                                                     |             |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------|
| Routes of Exposure             | Inhalation, ingestion or skin/eye absorption                                                                                   |                                                                     |             |
| Symptoms and Signs of Exposure | Eyes                                                                                                                           | Mild eye irritation.                                                |             |
|                                | Skin                                                                                                                           | Mild irritant.                                                      |             |
|                                | Inhalation                                                                                                                     | May irritate respiratory tract and mucous membranes.                |             |
|                                | Ingestion                                                                                                                      | Can cause abdominal pain, vomiting, diarrhea and methemoglobinemia. |             |
| Long Term Effects              | Methemoglobinemia is the primary long-term health effect of over-exposure.                                                     |                                                                     |             |
| Toxicity                       | No limits have been set for this material.                                                                                     |                                                                     |             |
|                                | <b>Water (7732-18-5)</b>                                                                                                       |                                                                     |             |
|                                | Rat Oral Toxicity                                                                                                              | LD <sub>50</sub>                                                    | 5,440 mg/kg |
| Carcinogen                     | The International Agency for Research on Cancer has not classified Lithium Nitrate for its carcinogenic potential (IARC 1987). |                                                                     |             |

## Section 12 – Ecological Information

|                               |                                                                                                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------------|
| General Product Information   | In high concentrations, this product may be harmful to both terrestrial and aquatic plant or animal life. |
| Water                         | High concentrations may be harmful to fish and other aquatic organisms.                                   |
| Ecotoxicity                   | No Data Available                                                                                         |
| Persistence and Degradability | No Data Available                                                                                         |
| Bioaccumulative potential     | No Data Available                                                                                         |
| Mobility in soil              | No Data Available                                                                                         |
| Other adverse effects         | No Data Available                                                                                         |

## Section 13 – Disposal Considerations

|                        |                                                                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste                  | Disposal must be done in accordance with local, state and federal environmental regulations. Place waste in an appropriate container with correct labeling.                    |
| Additional Information | Dispose of used containers at an approved waste handling facility. Empty containers may contain residue of the product, follow label warnings even after container is emptied. |

## Section 14 – Transport Information

|                     |                                  |
|---------------------|----------------------------------|
| DOT                 | Not regulated as dangerous goods |
| IMDG                | Not regulated as dangerous goods |
| IATA                | Not regulated as dangerous goods |
| Special Precautions | None Known                       |

## Section 15 – Regulatory Information

|                    |                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Component Analysis | This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).<br><b>Lithium nitrate (7790-69-4)</b><br>SARA 313: 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511) (related to Nitrate Compounds, water dissociable) |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                      |                                                                                                                                                                                                                                                                         |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| United States - SARA Hazard Category | This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories: |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                            | Fire - No                                                                                                                                                                                  | Pressure - No | Reactive - No    | Acute - Yes    | Chronic - Yes |     |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|----------------|---------------|-----|
| SARA Title III Information | This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: |               |                  |                |               |     |
|                            | Chemical                                                                                                                                                                                   | CAS No.       | CERCLA RQ (lbs.) | SARA Reporting |               |     |
|                            |                                                                                                                                                                                            |               |                  | 302            | 304           | 313 |
|                            | Lithium Nitrate                                                                                                                                                                            | 10377-60-3    | N/A              | N/A            | N/A           | N/A |

|                                          |                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CERCLA / Superfund, 40 CFR Part 117, 302 | If this product contains components subject to substances designated as CERCLA reportable Quantity (RQ) Substances, it will be designated in the above table with the RQ value in pounds. If there is a release of RQ Substance to the environment, notification to the National Response Center, Washington DC (800-424-8802) is required. |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|      |                                                                       |
|------|-----------------------------------------------------------------------|
| TSCA | All components are listed on the Active U.S. EPA TSCA Inventory List. |
|------|-----------------------------------------------------------------------|

## Section 16 – Other Information

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Issue Date       | 8/25/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Date of Revision | SDS Section 9 updated, pH ratio included. SDS Section 9 updated, freezing point data included. December 2024 GHS Hazard Statements updated. June 2024 SDS prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Disclaimer       | The information contained in this SDS refers only to the specific material designated and does not relate to any process or use with any other materials. This information is furnished free of charge and is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Since actual use is beyond our control, no warranty, expressed or implied, and no liability is assumed by TradeMark Nitrogen Corp. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents. TradeMark Nitrogen Corp. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material. |