TRADEMARK NITROGEN

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 (800) 424-9300	

Section 2 – Hazard Identification

GHS07

Signal Word: **WARNING**

Hazard Statements

H302 Harmful if swallowed
H320 Causes serious eye irritation
H335 May cause respiratory 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 $LiNO_3$	7790-69-4	30.00%
	Water (H_20)	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 bloods 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 dermititus (inflamation and redness of skin). Repeated ingestion of small amounts may cause weakness, depression, headaches, neurological effects and mental impairment.
First Aid: Notes to Physician	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. 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. 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, alkanlinization of the urine, and aminophyline increase lithium excretion in patients with good renal function. 4) Extracorpeal 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) 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) Raising the sodium intake does not increase lithium clearance (Thomasen, K. Renal lithium elimination in man and active treatment of lithium poisoning. Acta Psychiatr. Scand., Suppl. No. 207:83-84, 1969)

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) Fire - 0 (Least) 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. 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 LiNO3	Not Established	Not Established	Not Established	Not Established
Water (H_2O)	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 and colorless	Specific Gravity	1.195 - 1.205
Boiling Point	> 212°F (>100°C at 1 atmosphere	Molecular Weight	No Data Available
Freezing Point	No Data Available	Solubility in Water	No Data Available
Vapor Pressure	No Data Available	Flash Point	Not flammable
Weight per Gallon	10.01 lbs/gal @ 68°F	pH	7 - 10
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.	
	Water (7732-18-5)	
	Rat Oral Toxicity	LD_{50} 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).

Lithium nitrate (7790-69-4)

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	**6/27/2024**
Date of Revision	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.