



PURITAN PRODUCTS

Effective Date: 03/12/15

Replaces Revision: Not applicable

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: LITHIUM CHLORIDE SOLUTION

Synonyms: None

Chemical Formula: Not applicable to mixtures

Recommended Use of the Chemical and Restrictions On Use: Laboratory Chemicals, Manufacture of Substances

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

Acute aquatic toxicity (Category 3)

Risk Phrases:

Symbol: Xi

R22: Harmful if swallowed.

R36/R38: Irritating to eyes and skin.

R52: Harmful to aquatic organisms.

Label Elements:

Trade Name: LITHIUM CHLORIDE SOLUTION

Signal Word: Warning



Hazard Statements:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H402: Harmful to aquatic life.

Precautionary Statements:

P260: Do not breathe dust/ fume/ gas/ mist/ vapors / spray.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves / protective clothing / eye protection/ face protection.

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P302 + P352: IF ON SKIN: Wash with plenty of soap and 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.

P312: Call a POISON CENTER or doctor / physician if you feel unwell.

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

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

3. Composition / Information on Ingredients

CAS Number: Not applicable to mixtures

EC Number: Not applicable to mixtures

Index Number: Not applicable to mixtures

Molecular Weight: Not applicable to mixtures

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Lithium Chloride	7447-41-8	231-212-3	1-30%	Yes	Substance
Water	7732-18-5	231-791-2	70-99%	No	Mixture

4. First-aid Measures

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Consult a physician.

Ingestion: Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

Skin Contact: Wash exposed area with soap and water. Consult a physician.

Eye Contact: Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Consult a physician.

5. Fire-fighting Measures

Fire: Not expected to be a fire hazard.

Explosion: No information found.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Avoid breathing vapors, mist or gas. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Do not let product enter drains. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not flush to sewer!

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits: None established.

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear protective nitrile rubber gloves and clean body-covering clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless solution

Odor: Odorless

Odor Threshold: Not determined

pH: 6.0

% Volatiles by volume @ 21C (70F): No data available

Melting Point: No data available.

Boiling Point / Boiling Range: No data available

Flash Point: Not applicable

Evaporation Rate (BuAC=1): No data available

Flammability: Not applicable

Upper / Lower Flammability or Explosive Limits: Not applicable

Vapor Pressure (mm Hg): No data available

Vapor Density (Air=1): No data available

Relative Density: 1.06

Solubility: Soluble

Partition Coefficient: n-octanol / water: log Pow: -2.7

Auto-ignition Temperature: Not applicable

Decomposition Temperature: Not applicable

Viscosity: No data available

Explosive Properties: No data available

Oxidizing Properties: No data available

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Incompatibles

Incompatible Materials: Strong acids, Strong oxidizing agents, Bromine Ttrifluoride

Hazardous Decomposition Products: Emits toxic fumes of chlorine when heated to decomposition.

11. Toxicological Information

Emergency Overview: Information provided is for concentrated Lithium Chloride.

Potential Health Effects:

Inhalation: Causes irritation to the respiratory tract. Can be absorbed through inhalation with symptoms to parallel ingestion.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. In severe cases, lithium can cause apathy, sluggishness, drowsiness, slurred speech, blurred vision, irregular eye movements, weakness, incoordination, lethargy, heart effects, brain effects, ringing in the ears, tremors and muscle twitching, central nervous system damage, kidney effects, thyroid changes, coma, pulmonary edema, and renal failure.

Skin Contact: Contact may cause irritation, with redness and pain.

Eye Contact: May cause eye irritation.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient)	Known	Anticipated	IARC Category
Lithium Chloride (7447-41-8)	No	No	None
Water (7732-18-5)	No	No	None

Acute Toxicity:

Oral rat LD50: 526 mg/kg. Investigated as a tumorigen, mutagen, and reproductive effector. Has shown some evidence of reproductive effects in laboratory animals.

12. Ecological Information

Ecotoxicity: Harmful to aquatic life.

Toxicity to fish LC50 - *Ptychocheilus lucius* - 17 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (Water flea) - 1.2 mg/l - 64 h

Persistence and Degradability: No further relevant information available.

Bioaccumulative Potential: No further relevant information available.

Mobility in Soil: No further relevant information available.

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Not regulated

Maritime Transport IMDG/GGVSea

Not regulated

Air Transport ICAO-TI and IATA-DGR

Not regulated

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Lithium Chloride (7447-41-8)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Lithium Chloride (7447-41-8)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Lithium Chloride (7447-41-8)	No	No	No	No
Water (7732-18-5)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Lithium Chloride (7447-41-8)	No	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: No	
SARA 311/312:	Acute: Yes	Chronic: Yes	Fire: No	Pressure: No	
Reactivity: No		Mixture / Liquid			

Australian Hazchem Code: None allocated

Poison Schedule: None allocated

16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN MATERIAL SAFETY DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED THEREIN.

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