



# 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

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

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY OR DAMAGE RESULTING FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.