



SAFETY DATA SHEET
Clear-Chlor Lithium - 0040

Product Name: Clear-Chlor Lithium
Date: 5/19/2015

SECTION 1 **IDENTIFICATION**

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor:

U.S. PERS Emergency Telephone: 1-800-633-8253

Product Name: **Clear-Chlor Lithium**

Synonyms: Hypochlorous acid, lithium salt; Lithium chlorideoxide;
Lithium oxychloride; Hypure L

Chemical Name: Lithium Hypochlorite

Chemical Formula: CLiO

CAS Number: 13840-33-0

Product Use: Water sanitizer.

SECTION 2 **HAZARDS IDENTIFICATION**

Emergency Overview

Danger

Corrosive



Hazard Statement(s)

H272: May intensify fire; oxidizer
H314: Causes severe skin burns and eye damage
H302: Harmful if swallowed
H335: May cause respiratory irritation
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220: Keep/Store away from clothing/ combustible materials
P221: Take any precaution to avoid mixing with combustibles/other chemicals
P260: Do not breathe dust.
P262: Do not get in eyes, on skin, or on clothing.
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: [In case of inadequate ventilation] wear respiratory protection.
P233: Keep container tightly closed.
P264: Wash thoroughly after handling.

P363: Wash contaminated clothing before reuse
P321: Specific treatment (see First Aid Measures on this label).
P310: Immediately call a POISON CENTER or doctor/physician
P391: Collect spillage
P405: Store locked up
P403+P233: Store in a well-ventilated place. Keep container tightly closed



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P501: Dispose of contents/container in accordance with national and international regulations

SECTION 2 **HAZARDS IDENTIFICATION - Continued**

Routes of entry: Dermal contact, Eye contact, Inhalation, Ingestion.

Potential Acute Health Effects

Inhalation: Corrosive to the respiratory system.

Ingestion: Harmful if swallowed. Corrosive to the digestive tract.

Skin Contact: Corrosive to the skin. Causes burns.

Eye Contact: Corrosive to eyes. Causes burns.

SECTION 3 **COMPOSITION / INGREDIENTS INFORMATION**

<u>Component</u>	<u>CAS Number</u>	<u>Percent</u>
Lithium Hypochlorite* *35% Available Chlorine	13840-33-0	29%

SECTION 4 **FIRST AID MEASURES**

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to Physician: Treat symptomatically. Effects may be delayed. Can cause corneal burns.

SECTION 5 **FIRE-FIGHTING MEASURES**

Flammability: No specific fire or explosion hazard.

Extinguishing Media

Suitable: Not combustible, however, if material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Not Suitable: None known.

Special Exposure Hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition: Decomposition products may include halogenated compounds and metal oxide/oxides.



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Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.

SECTION 6 **ACCIDENTAL RELEASE MEASURES**

Personal Precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Method For Cleaning Up

Small Spill: Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapors. Wipe up with absorbent (clean rag or paper towels). Allow absorbent to dry before disposing with normal household garbage. Collect and seal in properly labeled containers or drums for disposal.

Large Spill: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labeled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

SECTION 7 **STORAGE AND HANDLING**

Handling: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 **EXPOSURE CONTROLS / PERSONAL PROTECTION**

Control Parameters: No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Recommended Monitoring Procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering Measures: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker



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exposure to airborne contaminants below any recommended or statutory limits.

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

SECTION 8 **EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued**

Personal Protective Equipment

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	White Granular Solid
Odor:	Chlorine
Odor Threshold:	Not Available
pH (1% solution) @ 25°C):	11
Specific Gravity (20°C):	0.9-1.0
Melting Point:	135°C (275°F)
Freezing Point:	Not Available
Boiling Point:	Not Available
Flash Point:	Not Available
Vapor Pressure:	Not Available
Relative Vapor Density (air=1):	>1
Relative Density:	Not Available
Solubility:	43% by wt. @ 25°C (77°F)
Relative Evaporation Rate (butylacetate=1):	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Flammability (solid, gas):	Not Available
Partition coefficient (n-octanol/water):	Not Available
Viscosity:	Not Available
Molecular Weight:	58.39

SECTION 10 **STABILITY AND REACTIVITY**

Chemical Stability: This material is thermally stable when stored and used as directed.

Conditions to Avoid: Elevated temperatures will result in the material decomposing releasing chlorine gas.



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Incompatible Materials: Will react with most organic chemicals. Corrosive to most metals in the presence of moisture.

Hazardous Decomposition Products: Oxides of carbon and nitrogen, chlorine, smoke and other toxic fumes.

Hazardous Reactions: Contact with acids will result in the evolution of chlorine gas.

SECTION 11 **TOXICOLOGICAL INFORMATION**

Potential Chronic Health Effects

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: No known significant effects or critical hazards.

Fertility Effects: No known significant effects or critical hazards.

Target Organs: Contains material which causes damage to the following organs: gastrointestinal tract, eyes. Contains material which may cause damage to the following organs: lungs.

Over-Exposure Signs/Symptoms

Inhalation : Adverse symptoms may include the following: Respiratory Tract Irritation
Coughing

Ingestion : Adverse symptoms may include the following: Stomach Pains

Skin : Adverse symptoms may include the following: Pain or Irritation
Redness
Blistering May Occur

Eyes : Adverse symptoms may include the following: Pain
Watering
Redness

Acute Toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Lithium Hypochlorite	LD50 Dermal	Rabbit	8100 mg/kg	-
	LD50 Oral	Rat	555 mg/kg	-

Carcinogenicity Classification

Product/Ingredient Name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Lithium Hypochlorite	-	3	-	-	-	None

SECTION 12 **ECOLOGICAL INFORMATION**

Ecotoxicity: No known significant effects or critical hazards.

Aquatic Ecotoxicity

Product/Ingredient Name	Test	Result	Exposure	Species
Lithium Hypochlorite	-	Acute EC50 0,037 ppb Fresh water	48 hours	Daphnia – Water flea – Daphnia magna - <24 hours
	-	Acute LC50 0,69 mg/L	96 hours	Fish



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	-	Acute LC50 0,97 mg/L	96 hours	Fish
	-	Acute LC50 0,2 ppm Fresh water	96 hours	Fish – Rainbow trout, Donaldson trout – Oncorhynchus mykiss – Juvenile (Fledgling, Hatchling, Weanling)

Toxicity of the Products of Biodegradation: The products of biodegradation are as toxic as the original product.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 TRANSPORTATION INFORMATION



DOT: UN Number: 1471
UN Proper Shipping Name: Oxidizing Solid, N.O.S. (containing LITHIUM HYPOCHLORITE)
Transport Hazard Class: 5.1
Packing Group: II

TDG: UN Number: 1471
UN Proper Shipping Name: Oxidizing Solid, N.O.S. (containing LITHIUM HYPOCHLORITE)
Transport Hazard Class: 5.1
Packing Group: II
Marine Pollutant: Yes

MEX: UN Number: 1471
UN Proper Shipping Name: Oxidizing Solid, N.O.S. (containing LITHIUM HYPOCHLORITE)
Transport Hazard Class: 5.1
Packing Group: II
Marine Pollutant: Yes

SECTION 15 REGULATORY INFORMATION

UNITED STATES

SARA Section 311 Hazard Category (40 CFR 370): Immediate (acute) health hazard, reactive.

SARA Section 313 Reportable Ingredients (40 CFR 372): This product contains lithium carbonate which is



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subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986. This information must be included in all MSDS's that are copied and distributed for this material.

SARA Section 302 Extremely Hazardous Substances: Not listed.

CERCLA Regulatory (40 CFR 302.4): Not listed.

TSCA Regulatory (40 CFR 707.60): This product is not subject to TSCA 12 (b) Export Notification Requirements.

TSCA Status (40 CFR 710): All components except for Lithium Chlorate, an impurity, are listed.

SECTION 15	REGULATORY INFORMATION - Continued
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STATE REGULATIONS

California Proposition 65: WARNING. This product contains a chemical known to the State of California to cause reproductive toxicity.

CANADA

WHMIS (Workers Hazardous Material Information)

Product Identification No: 1479
Hazard Classification: Class C (Oxidizer)
Class E (Corrosive)

Ingredient Disclosure List: Not listed

NFPA RATING: 3 - Health
0 - Flammability
1 - Reactivity
OXY Special (Oxidizer)

SECTION 16	OTHER INFORMATION
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No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 5/19/2015
Phoenix Products Company