

# MATERIAL SAFETY DATA SHEET

Global Water Treatment Chemicals

For Emergency Assistance Contact Chemtrec 800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Pro Chlor Tabs  
**PRODUCT ID:** 47010, 47025, 47050, 47100  
**SYNONYMS:** Calcium Hypochlorite Tablets, Cal Hypo Tabs

**ISSUE DATE:** 05/10/2010  
**EDITION NO.:** 2

**PREPARER:** Product Safety, Chemicals  
**MAXIMUM USE FOR POTABLE WATER:** 15mg/L

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Material/CAS Number</u>	<u>Percent</u>
Calcium Hypochlorite 778-54-3	>65
Calcium Chlorate 10137-74-3	<3
Calcium Hydroxide	<2

**Note: Minimum 65% Available Chlorine. 35% inert ingredients**

## 3. HAZARDOUS IDENTIFICATIONS

### EMERGENCY OVERVIEW:

DANGER! Corrosive-Causes severe and irreversible burns to eyes and skin. Harmful if inhaled. May cause irritation and inflammation to the respiratory tract. Harmful or fatal if swallowed. Strong Oxidizing Agent! Mix only with water. Never add water to product. Always add the product to large quantities of water. Do not mix with any other chemicals. Contamination with moisture, acids, organic materials and other easily combustible materials such as petroleum, paint products, wood or paper ma cause fire or explosion and the liberation of hazardous gasses. Do not add this product to any dispensing devise containing any remnants of any other product. Such use may cause violent reaction leading to fire or explosion. Very toxic to aquatic organisms.

**Precautions:** Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Irritating to nose and throat. Do not swallow. Do not eat, drink or smoke in work area. Wash hands after handling. Remove and wash contaminated clothing before reuse. Keep out of reach of children.

#### 4. FIRST AID MEASURES

**INHALATION:** Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

**EYE/SKIN CONTACT: EYE:** Remove contact lenses and pour a gentle stream of warm water through the affected eye for at least fifteen minutes. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.  
**SKIN:** Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

**INGESTION:** Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

#### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not Applicable.

**EXTINGUISHING MEDIA:** Drench with large quantities of water only. Do not use dry chemicals or foam. Product supplies its own oxygen, therefore attempts to smother fire with a wet blanket, carbon dioxide, dry chemical extinguisher or other means are not effective.

**SPECIAL FIRE-FIGHTING PROCEDURES:** Product decomposes at approximately 338-356 degrees F (170-180 C) releasing oxygen gas. Container may rupture. Fire-fighters must wear NIOSH approved, pressure demand, self contained breathing apparatus with full face piece for possible exposure to hazardous gases. Emits toxic fumes under fire conditions.

#### 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Use extreme caution in handling spilled material. Do not mix with any other chemicals. Contamination with moisture, acids, organics or other easily combustible materials such as petroleum, paint products, wood or paper may cause fire or violent decomposition. If fire or decomposition occurs in area of spill, immediately douse with plenty of water. Otherwise, sweep up all visible material using a clean (new, if possible), dry shovel and broom and dissolve in water. Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which this product is being consumed.

## 7. HANDLING AND STORAGE

### **PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:**

Store in a cool, dry, well-ventilated place. Keep in original container. Keep container closed when not in use. Keep away from heat, spark, flames, direct sunlight, and other sources of heat, including lighted tobacco products. Use only a clean (new, if possible), dry scoop made of metal or plastic each time product is taken from the container. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause violent reaction leading to fire or explosion. Add this product only to water. Never add water to product. Always add the product to large quantities of water. May cause fire or explosion if mixed with other chemicals. Fire may result if contaminated with acids, organic materials and other easily combustible materials such as oil, kerosene, gasoline, paint products, wood and paper. Do not reuse container. Residual material remaining in empty container can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection. Do not contaminate water, food, or feed by storage or disposal of this product.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### **Exposure Limits:**

**8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)**

**OSHA:** The OSHA exposure limit(S) for Calcium hydroxide: 5mg/m<sup>3</sup> TWA.  
Calcium Carbonate: 15mg/m<sup>3</sup> (total dust) 3mg/m<sup>3</sup> (respirable dust) TWA

**ACGIH:** The ACGIH exposure limit(S) for Calcium hydroxide: 5mg/m<sup>3</sup> TWA.  
Calcium Carbonate: 10mg/m<sup>3</sup> (total dust) 5mg/m<sup>3</sup> (respirable nuisance particulate) TWA

**ONTARIO:** The Ontario Exposure limit(s) for Calcium hydroxide: 5mg/m<sup>3</sup> TWAEV  
Calcium carbonate 10mg/m<sup>3</sup> TWAEV

**PPG Internal Permissible Exposure Limit (IPEL):** Calcium hypochlorite: 1 mg/m<sup>3</sup> TWA. 2mg/m<sup>3</sup> STEL

**RESPIRATORY PROTECTION:** Where the potential for exposure to dust exists, use the appropriate regulatory compliant full facepiece air-purifying respirator with acid gas cartridge and particulate prefilter. Carefully read and follow the respirator manufacturer's instructions and information.

**VENTILATION:** Use local exhaust or general room/dilution ventilation sufficient to maintain employee exposure below permissible exposure limits.

**EYE AND FACE PROTECTION:** Splashproof goggles and faceshield.

**PROTECTIVE GLOVES:** Butyl rubber, Neoprene, Nitrile.

**OTHER PROTECTIVE EQUIPMENT:** Boots, aprons, or chemicals suits should be used when necessary to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	<b>Decomposes at approx. 338-356 F (170-180 C)</b>
<b>Vapor Density (Air=1):</b>	<b>NA</b>
<b>Specific Gravity (water=1):</b>	<b>NA</b>
<b>pH:</b>	<b>Alkaline</b>
<b>FREEZING/MELTING POINT:</b>	<b>NA</b>
<b>SOLUBILITY (wt. % in water):</b>	<b>217 g/l@27 C</b>
<b>Bulk Density (kg/m<sup>3</sup>):</b>	<b>67-71 lbs./cu.ft</b>
<b>VOLUME % VOLATILE:</b>	<b>NA</b>
<b>VAPORE PRESSURE:</b>	<b>NA</b>
<b>EVAPORATION RATE:</b>	<b>NA</b>
<b>HEAT OF SOLUTION:</b>	<b>Slight Exothermic</b>
<b>Physical State:</b>	<b>2 5/8" Tablets</b>
<b>Odor:</b>	<b>Slight Chlorine</b>
<b>Color:</b>	<b>white</b>

## 10. STABILITY AND REACTIVITY

**Stability:** Unstable above 338 F (170 C)

**HAZERDOUS POLYMERIZATION:** Will not occur

### **INCOMPATIBILITY (CONDITIONS/MATERIALS TO AVOID):**

Contamination, Excessive heat above 338 F (170 C). Moisture, Acids, Reducing agents, Organics, Combustible materials, Petroleum products, Paint Products, Wood and Paper.

### **HAZERDOUS THERMAL DECOMPOSITION/CUMBUSTION PRODUCTS:**

Acid or ammonia contamination will release toxic gases. Excessive heat will cause decomposition resulting in the release of oxygen and chlorine gas.

## 11. TOXICOLOGICAL INFORMATION

<b>ACUTE INHALATION LC50:</b>	No mortality at 3.5 mg/l (rat) (1 hour). Slight to very low
<b>ACUTE DERMAL LD50</b>	>1000 mg/kg. (rabbit) Slight to very low toxicity
<b>SKIN IRRITATION</b>	Corrosive
<b>EYE IRRITATION</b>	Corrosive
<b>ACUTE ORAL LD50</b>	850mg/kg. (rat) Moderate toxicity

**CARCINOGENICITY STATUS:** This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, ACGIH, or OSHA.

**MEDICAL CONDITIONS AGGRAVATED:** None Known

**EFFECTS OF OVEREXPOSURE:**

**ACUTE:**

**Inhalation:** Inhalation of Calcium Hypochlorite dust and deposition of particles in the respiratory tract can lead to irritation of the tissue and cause a variety of effects. These effects are dependent on concentration and include: upper respiratory tract irritation, nasal congestion, coughing, sore throat, laryngitis and shortness of breath. In operations where there are high concentrations of respirable particles, pulmonary edema (fluid in the lung) may be produced. If not treated immediately, pulmonary edema can be life threatening. Since this product is in granular or tablet form, particles of respirable size are not generally encountered.

**Eye/Skin:** Calcium Hypochlorite is corrosive to the eyes. Contact of calcium hypochlorite dust with the eyes, even a minute amount for a short duration can cause severe irritation and even blindness. Contact with the skin may cause severe irritation, burns, or tissue destruction. In studies utilizing rabbits, the skin irritation score was 8/8 and the eye irritation score was 98.5/110.

**Ingestion:** Calcium Hypochlorite, if swallowed, cause severe burns to the digestive tract and can be fatal.

**CHRONIC:**

**Genotoxicity:** Calcium hypochlorite produced positive responses in in-vitro assays using bacterial systems (the Ames test) and chromosomal aberrations in Chinese hamster fibroblasts. In a whole animal experiment (mouse micronucleus test), exposures ranging from 20 to 160 mg/kg produced no compound related chromosomal abnormalities.

**Carcinogenesis:** Although no study has been conducted with calcium hypochlorite, the carcinogenic potential of sodium hypochlorite was studied in F344 rats. After 104 weeks of drinking water containing up to 2000ppm sodium hypochlorite, there was no evidence that this chemical produced any carcinogenic response. In addition, this exposure did not result in any adverse effects

## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:**

0.088 mg/l (Bluegill) 96 hour LC50. Extreme toxicity

**ENVIRONMENTAL FATE:**

No data at this time

### 13. DISPOSAL CONSIDERATIONS

#### DISPOSAL METHOD:

Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which this product is being used. If this is not possible, dissolve material in water and carefully neutralize dissolved material by adding hydrogen peroxide (one pint of 35% hydrogen peroxide solution per pound of calcium hypochlorite to be neutralized) then dilute the neutralized material with plenty of water and flush to the sewer. Note: Only properly neutralized material should be flushed to sewer. Unneutralized material can cause environmental damage to receiving water or can interfere with treatment plant operations. Care must be taken when using or disposing of chemical material and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the US Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, as well as any other relevant Federal, State, or local laws/regulations regarding disposal.

### 14. TRANSPORTATION INFORMATION

<b>Proper Shipping Name:</b>	Calcium Hypochlorite Hydrated
<b>Hazard Class:</b>	5.1 (Oxidizer)
<b>UN Number:</b>	UN2880
<b>Packing Group:</b>	II
<b>USA-RQ, Hazardous</b>	
<b>Substance and Quantity:</b>	10 lbs./4.5 (calcium hypochlorite)
<b>Marine Pollutant</b>	None
<b>Additional Information:</b>	USA Shipments only – Hazardous Substances

Are regulated in the USA when shipped above their Reportable Quantity.

### 15 REGULATORY INFORMATION

**OTHER REGULATIONS: OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

#### OTHER CLASSIFICATIONS:

**USA TSCA:** All components of this product are listed on TSCA Inventory.

**EU EINECS:** All components in this product are listed on EINECS.

**CANADA DOMESTIC SUBSTANCE LIST (DSL):** This product and/or all its components are listed on the Canadian DSL.

**AUSTRALIA AICS:** All components of this product are listed on AICS.

**WHMIS (Canada):** Class C: Oxidizing material. CLASS E: Corrosive solid.

**HMIS (U.S.A.):**

**Health Hazard: 3**

**Fire Hazard: 0**

**Reactivity: 2**

**Personal Protection: j**

**National Fire Protection Association (U.S.A.):**

**Health: 3**

**Flammability: 0**  
**Reactivity: 1**  
**Specific Hazard:**

**Protective Equipment:**

Gloves, Lab coat, Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**16. OTHER INFORMATION**

References: Not available

Other Special Considerations: Not available

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