

I - PRODUCT IDENTIFICATION

Product: Clor Mor Cal-Shock SWB
 Chemical Family: Hypochlorite Mixture
 Formula: Not Applicable / Mixture
 Description: Sanitizer and oxidizer
 CAS Number: 7778-54-3
 Synonyms:
 OSHA Hazard Classification: Toxic by inhalation, corrosive to eyes and skin, skin and eye hazard, lung toxin.

COMPANY IDENTIFICATION

AllChem Performance Products
 6010 NW First Place
 Gainesville, FL 32607
 Tel:352-378-9696

24 HR EMERGENCY TELEPHONE NUMBER

INFOTRAC (Transportation): (800)535-5053

II – COMPOSITION, INFORMATION ON INGREDIENTS

Chemical or Common Name:		Exposure Limits	
		OSHA PEL:	ACGIH TLV:
Calcium Hypochlorite 7778-54-3	40-55%	3 mg/m ³ (ceiling) as Chlorine	
Sodium Chloride 7647-14-5	5-15%	NE	NE
Calcium Chlorate 10137-74-3	0-4%	NE	NE
Calcium Chloride 10043-52-4	0-4%	NE	NE
Calcium Hydroxide 1305-62-0	0-5%	None	5mg/m ³
Calcium Carbonate 471-34-1	0-4%		10mg/m ³ 15mg/m ³ (Total Dust) 5mg/m ³ (Respirable fraction)
Magnesium sulfate Heptahydrate 10034-99-8 (anhydrous 7487-88-9)	25-35%	NE	NE
Water 7732-18-5	17-22%	NE	NE

*NE- none established

Calcium hypochlorite, calcium chlorate, calcium chloride, calcium hydroxide, calcium carbonate and magnesium sulfate heptahydrate are hazardous per 29 CFR

III – HAZARDS IDENTIFICATION

WARNING STATEMENT AND WARNING PROPERTIES: MODERATELY TOXIC IF SWALLOWED. AVOID BREATHING DUST OR FUMES. HARMFUL IF PRODUCT IS INHALED IN HIGH CONCENTRATIONS. CAUSES EYE, DIGESTIVE TRACT AND RESPIRATORY TRACT BURNS. DRY MATERIAL CAUSES MODERATE SKIN IRRITATION. WET MATERIAL CAUSES SKIN BURNS.

Primary Route(s) of Entry:

Ingestion: (X)
Inhalation: (X)
Skin Contact: (X)
Eye Contact: (X)

Primary Health Hazards (Acute and Chronic):

Human Response Data:

Odor Threshold: Approximately 2.0 mg/cubic-meter, based on odor threshold of chlorine.

Irritation Threshold: Approximately 18-31 mg/cubic-meter, based on the irritation threshold of chlorine.

Immediately Dangerous to Life or Health: Approximately 63 mg/cubic-meter, based on IDLH Concentration of chlorine.

Carcinogenity Listings:

OSHA: ()
NTP: ()
IARC: ()

Signs & Symptoms of Exposure (Acute and Chronic):

Ingestion:

Acute: Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Significant exposure to this material can lead to serious health effects and/or death.

Chronic: There are no known or reported effects from chronic exposure except for effects similar to those experienced from single exposure. The acute corrosivity of this product makes chronic ingestion of significant amounts unlikely.

Inhalation:

Acute: Inhalation of dust or vapor from this product can be irritating to the nose, mouth, throat and lungs. In confined areas, mechanical agitation can result in high levels of dust, and reaction with incompatible materials can result in high concentrations of chlorine vapor, either of which may result in burns to the respiratory tract, producing lung edema, shortness of breath, wheezing, choking, chest pains, impairment of lung function and possible permanent lung damage.
Chronic: Chronic (repeated) inhalation exposure may cause impairment of lung function and permanent lung damage.

Skin Contact:

Acute: Dermal exposure to dry material causes moderate skin irritation characterized by redness & swelling. Dermal exposure to wet material can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.

Chronic: Effects from chronic skin exposure would be similar to those from single exposure. In addition, chronic exposure to wet material may cause effects secondary to tissue destruction.

Eye Contact: Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage.

Medical Conditions Aggravated By Exposure: Asthma, respiratory and cardiovascular disease.

Interactions with other chemicals, which enhance toxicity: None known or reported.

IV – FIRST AID MEASURES

Emergency and First Aid Procedures:

Eyes: Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call a physician at once.

Skin: Immediately flush with water for at least 15 minutes. Call a physician. If clothing comes in contact with the product, it should be removed immediately and laundered before reuse.

Ingestion: Immediately drink large quantities of water. Do Not induce vomiting. Call a physician at once. Do not give anything by mouth if the person is unconscious or if having convulsions.

Inhalation: Remove victim to fresh air. Support respiration if needed. Call a physician.

V – FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD DATA

This product contains an ingredient (calcium hypochlorite) which is both a strong oxidizer and is chemically reactive with many substances. Strong oxidizers are capable of intensifying a fire once started. Because of this, any contamination of the product with other substances by spill or otherwise should be avoided.

Flash Point: Not Applicable

Flammable: No

Combustible: No

Pyrophoric: No

Flammable Limits: At normal atmospheric temperature and pressure (Percent volume in air)

LEL: Not Applicable

UEL: Not Applicable

Auto-ignition Temperature: Not applicable

NFPA RATINGS:

NFPA Oxidizer Class: Meets the criteria of an NFPA Class 1 Oxidizer.

HMIS Rating

Health: 3

Flammability: 0

Reactivity: 1

Extinguishing Media: Water Only.

Special Fire-fighting Procedures: Do Not Use Dry Extinguishers containing ammonium compounds. Use water to cool containers exposed to fire. Personal Protection for Emergency Spill and Fire-Fighting situations: Response to this material requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus, chemical resistant gloves, coveralls and boots in addition to the normal fire fighter equipment.

VI – ACCIDENTAL RELEASE MEASURES

Reportable Quantity: 10 lbs. (as Calcium Hypochlorite) Per 40 CFR 302.4

Steps To Be Taken In Case Material Is Spilled Or Released: Spill Mitigation Procedure: Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop sources of spill as soon as possible and notify appropriate personnel.

AIR RELEASE: Vapors may be suppressed by the use of a water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

WATER RELEASE: This material is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

LAND SPILL: Danger: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction, which may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors.

Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

SPILL RESIDUES: Dispose of per guidelines under this section:

Waste Disposal: This material may be neutralized for disposal.

Personal Protection for Emergency Spill and Fire-Fighting situations: Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots.

VII – HANDLING AND STORAGE

Precautions to Be Taken in Handling and Storage:

DO NOT TAKE INTERNALLY. AVOID INHALATION OF DUST AND FUMES. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. UPON CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE REUSE.

Storage Conditions: Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

DO NOT STORE AT TEMPERATURES ABOVE: 52°C (125°F). In the event that the calcium hypochlorite were to separate from the blend, storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Also, the magnesium sulfate heptahydrate will begin to lose water of crystallization at approximately 150°C (302 °F). Should all the water of crystallization be lost, the likelihood of rapid decomposition occurring, as above, would be increased.

Other Precautions:

Shelf Life Limitations: Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Do not store product at temperatures above 52°C (125°F). When stored under moderate temperature conditions, product will maintain stated label strength for approximately two years. Prolonged storage at 35°C (95°F) or above will significantly shorten the shelf life. Storage in a climate-controlled storage area or building is recommended in those areas where extremes of high temperatures occur.

Incompatible Materials for Packaging: Product packaging must be clean and free of contamination by other materials, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder, fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

Incompatible Materials for Storage or Transport: Do not allow product to come in contact with other materials, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Wear NIOSH approved respirator if dusts are created. NIOSH approved full face-piece air purifying respirator with chlorine cartridges and dust/mist pre-filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or in exposure levels which exceed 10X the PEL.

Ventilation: Use local exhaust ventilation to minimize dust and chlorine levels where industrial use occurs. Otherwise, ensure good general ventilation.

Other Protective Clothing or Equipment:

Skin and eye protective equipment: Wear gloves, and safety glasses to avoid skin and eye contact. Where industrial use occurs, chemical goggles and/or full impermeable suit may be required.

Protective Clothing Type: Neoprene, Nitrile, Natural Rubber (this includes: gloves, boots, apron, protective suit)

IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: Not Applicable

Vapor Pressure @ 25°C: Not Applicable

Vapor Density (Air=1): Not Applicable

Solubility in Water: Approximately 18% @ 25°C (Product also contains calcium hydroxide and calcium carbonate which will leave a residue.)

Appearance and odor: White granules or caplets with chlorine like odor.

Specific Gravity (H₂O=1): Not Applicable

Percent volatile by volume: Not Applicable

Melting Point:

Evaporation Rate: Not Applicable

Freezing Point: Not Applicable

Decomposition Temperature: Onset – Approximately 170-180 °C (338-356°F)

Bulk Density: 0.8 g/cc, loose

pH @ 25°C: 10.0-10.8 (1% solution)

Molecular Weight: 143 (Active ingredient)

Coefficient of oil/water distribution: Not Applicable

X – STABILITY AND REACTIVITY

Stability: () Unstable () Stable

Conditions under which this product may be unstable:

Temperatures above: 170°C (338°F)

Mechanical shock or impact: No

Electrical (static) discharge: No

Incompatibility: This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials.

Hazardous Decomposition or By-Products: Chlorine gas

Hazardous Polymerization: () May Occur (X) Will Not Occur

Conditions to Avoid: Storage at temperatures >125°F (52°C). Prevent ingress of humidity and moisture into container or package. Always close the lid.

Summary of reactivity:

Oxidizer: Not considered to be an OSHA oxidizer per 29 CFR 1910.1200.
Not an oxidizer according to the criteria established by the 49 CFR DOT regulations.
Meets the criteria of a Class 1 Oxidizer as established by NFPA.

Pyrophoric: No

Organic Peroxide: No

Water Reactive: No

Other: This product meets the specifications of ASTM method E-487-74 as set forth in 49 C.F.R. Sec. 173.21, Title 49 – Code of Federal Regs. (DOT Regs.)

XI- TOXICOLOGICAL INFORMATION

Animal Toxicology:

Acute Toxicity:

Inhalation LC50: >2.04 mg/l (1 hr., rat); >0.51 mg/l (4 hr., rat) – extrapolated from inhalation toxicity studies using calcium hypochlorite.

Oral LD50: Approximately 1200 mg/kg (rat) based on extrapolation from oral toxicity studies using calcium hypochlorite.

Dermal LD50: >2 g/kg. (rabbit)

Irritation: Causes burns to eyes. Dry material causes skin irritation, wet material causes skin burns.

Acute Target Organ Toxicity: This product is corrosive to the eyes and upon inhalation may cause irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Chronic Toxicity: There are no known or reported effects from repeated exposure except those secondary to burns.

Reproductive Toxicity: Calcium Hypochlorite has been tested for Teratogenicity in laboratory animals. Results of this study have shown that calcium Hypochlorite is not a teratogen.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source, including: IARC, OSHA, NTP or EPA. One hundred mice were exposed dermally 3 times a week for 18 months to a solution of calcium Hypochlorite. Histopathological examination failed to show an increased incidence of tumors.

IARC (International Agency for Research on Cancer) reviewed studies conducted with several Hypochlorite salts. IARC has classified Hypochlorite salts as having inadequate evidence for Carcinogenicity to humans and animals. IARC therefore considers Hypochlorite salts to be not classifiable as to their Carcinogenicity to humans. (Group 3 substance)

Mutagenicity: Calcium Hypochlorite has been tested in the dominant lethal assay in male mice, and it did not induce a dominant lethal response. Calcium Hypochlorite has been reported to produce mutagenic activity in two in vitro assays. It has, however, been shown to lack the capability to produce mutations in animals based on results from the micronucleus assay. In Vitro assays frequently are inappropriate to judge the mutagenic potential of bactericidal chemicals due to a high degree of cellular toxicity. The concentration, which produces mutations in these in vitro assays, is significantly greater than the concentrations used for disinfection. Based on high cellular toxicity in in vitro assays and the lack of mutagenicity in animals, the risk of genetic damage to humans is judged not significant.

XII – ECOLOGICAL INFORMATION

Aquatic Toxicity:

Bluegill, 96 hr. LC50: Approximately 0.12 mg/l (nominal, static) based on extrapolation from studies using calcium hypochlorite

Rainbow Trout, 96 hr. LC50: 0.22 mg/l (nominal, static) based on extrapolation from studies using calcium hypochlorite

Daphnia magna, 48 hr. LC50: 0.15 mg/l (nominal, static) based on extrapolation from studies using calcium hypochlorite

Avian Toxicity:

Wildlife Toxicity:

Bobwhite quail, dietary LC50: >7,000 ppm based on extrapolation from studies using calcium hypochlorite

Mallard ducklings, dietary LC50: >7,000 ppm based on extrapolation from studies using calcium hypochlorite

Bobwhite quail, oral LD50: Approximately 4800 mg/kg based on extrapolation from studies using calcium hypochlorite

XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of subpart C, nor is it listed as a hazardous waste under Subpart D.

As a non hazardous waste, it should be disposed of in accordance with local, state, and federal regulations.

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non- hazardous wastes.

XIV - TRANSPORTATION DATA

U.S. Department of Transportation - 49 CFR

Proper Shipping Name: RQ, Other Regulated Substances, Solid, NOS (Calcium Hypochlorite)

Hazard Class/Division Number: 9

ID Number: UN 3077

Packing Group: PG III

Label Required:

Placard Required:

Marine Pollutant:

Reportable Quantity: 10 lbs

Emergency Guide No: 171

Hazardous Substance as defined in 49 CFR 172.101, Appendix A: Yes

International Maritime Organization - IMDG

Not regulated in transport

Proper Shipping Name:

Hazard Class/Division Number:

ID Number:

Packing Group:

Label Required:

Placard Required:

Marine Pollutant:

Emergency Telephone Number:

Air(IATA/ICAO)

Not regulated in transport

XV - REGULATORY INFORMATION

This chemical appears on the following lists:

- (X) SARA Title 3:
 - Hazard Categories, per 40 CFR 370.2:
 - Health: Immediate (Acute)
 - Physical:
- (X) TSCA

Emergency Planning and Community right to know, per 40 CFR 355, APP.A:

Extreme Hazardous Substance – Threshold planning quantity: None established

Supplier Notification Requirements, per 40 CFR 372.45: None established

Regulated Under FIFRA, USDA & FDA

XVI - ADDITIONAL INFORMATION

This MSDS replaces the 05/10/2005 version. Any changes in information are as follows:
In Section I - 24 hr emergency telephone number

ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL.

Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section XV of this document should NOT be considered all-inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

The information in this MSDS was obtained from sources, which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.** The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.** This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Issue Date:	05/10/2005
Ref No:	027AAK
Revision Date:	07/13/2005
Revision No:	1