



# Aqua Chemical Supply, Inc.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Calcium Hypochlorite Granular

Synonym: Calcium Hypochlorite Granular; Cal Hypo Granules; Ca (OCl)<sub>2</sub>. All-Clear<sup>™</sup> Shock Clear, AmeriChlor Calcium Hypochlorite Granules, Calcium Hypochlorite, Freestyle<sup>®</sup> Calcium Hypochlorite Granular 85, Inductor<sup>•</sup>, Induclor11170, Omega calcium Hypochlorite Granules, Pittclor<sup>®</sup>, Power Powder<sup>®</sup> Plus, Power Powder<sup>®</sup> Plus<sup>™</sup>, Prestochlor<sup>™</sup>, Re-Fresh<sup>®</sup>, Regal<sup>®</sup>, Repak<sup>™</sup> + Granules, Repak<sup>™</sup> Dry Chlorinating Granules, Super Shock-It<sup>®</sup>, Super Shock-It<sup>®</sup> 73, SuperZapplt<sup>™</sup>, Sustain<sup>®</sup> Shock Treatment, Vanguard <sup>®</sup>Plus Calcium Hypochlorite Granules, Zapptit<sup>™</sup> Zapptit<sup>™</sup> 73

Manufacturer/Supplier/Distributor:  
Univar Canada Ltd.  
9800 Van Horne Way  
Richmond, BC V6X 1W5

Emergency telephone number: For emergency assistance involving chemicals call  
CHEMTREC day or night at: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

Emergency overview : DANGER!

**STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. DO NOT MIX WITH OTHER CHEMICALS, INCLUDING ANY OTHER POOL CHEMICALS OF ANY KIND. MIXING WITH OTHER CHEMICALS COULD CAUSE A FIRE OR EXPLOSION.**

Contamination with moisture, acids, organic matter, other chemicals (Including, but not limited to cleaning chemicals and other pool chemicals), petroleum or paint products or other easily combustible materials may start a chemical reaction with generation of heat. Liberation of hazardous gases and possible violent reaction leading to fire or explosion. ALWAYS ADD PRODUCT TO LARGE QUANTITIES OF WATER TO FULLY DISSOLVE PRODUCT. DO NOT POUR WATER INTO PRODUCT, ALWAYS ADD PRODUCT TO WATER. Do not add this product to any dispensing device containing remnants of any other product or pool chemical.

**CAUSES EYE AND SKIN BURNS. CAUSES RESPIRATORY TRACT IRRITATION. HARMFUL IF INHALED. HARMFUL OR FATAL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.**

Very toxic to aquatic organisms.

Keep away from heat, sparks, flames, direct sunlight, and other sources of heat, including lighted tobacco products. Keep away from Incompatible materials and combustible materials. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container closed. If product becomes contaminated or decomposes do not reseal container. If possible isolate container in open air or well. Ventilated area. Wash thoroughly after handling. Keep out of waterways.

Potential Acute Health Effects:

Inhalation : Harmful If inhaled. Severely Irritating to the respiratory system. Can Irritate eyes, nose, mouth and throat

Ingestion: Harmful or fatal if swallowed. May cause burns to mouth, throat and stomach.

Skin: Corrosive to the skin. Causes burns. Harmful In contact with skin.

Eyes Corrosive to eyes. Causes burns.

**Over Exposure Symptoms / Signs**

Inhalation : Adverse symptoms may Include the following:

Respiratory track irritation, coughing breathing difficulty or shortness of breath, pulmonary edema

Ingestion: Adverse symptoms may Include the following: stomach pains nausea or vomiting gastric perforation

Skin: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur

Eyes: Adverse symptoms may Include the following: pain, watering, redness, cornea, opacity. Direct contact with the eyes can cause irreversible damage, including blindness.

Medical conditions aggravated by overexposure:

Pre-existing disorders Involving any target organs mentioned In this SDS as being at risk may be aggravated by over-exposure to this product

This Safety Data Sheet has been prepared In accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200). See toxicological information (Section 11).

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients Name	CAS Number	%
calcium hypochlorite	7778-54-3	65-76
sodium chloride	7647-14-5	10-30
calcium carbonate	471-34-1	1-3
calcium dihydroxide	1305-62-0	1-3
calcium chlorate	10137-74-3	0-3

Notes: Available Chlorine: 65-76%, Inert ingredients 24-35 % (Includes 5.5-8.5% water).

There are no additional ingredients present which, within the current knowledge of the supplier and In the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. FIRST AID MEASURES

If ingestion, Irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN Immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Continue rinsing until medical attention can be obtained.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting. Get medical attention immediately.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

#### **5. FIRE FIGHTING MEASURES**

Flammability of the product: Product is not known to be flammable, combustible, or pyrophoric. This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire. This product is a strong oxidizer which is capable of intensifying a fire once started. Container may rupture.

##### Extinguishing media

Suitable: Drench with large quantities of water only.

Not suitable: Do not use dry chemicals or foams. Product supplies own oxygen, therefore attempts to smother fire with a wet blanket, carbon dioxide, dry chemical extinguisher or other means are not effective. Product has the potential to cause a violent reaction if dry chemical fire extinguishers are used.

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. Emits toxic fumes under fire conditions. Chlorine gas may be generated. This material is very toxic to aquatic organisms. All water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products: Decomposition products may include the following materials:  
carbon oxides, halogenated compounds, metal oxide/oxides

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

#### **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. Shut off all ignition sources. No flames, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment

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). Water polluting material. May be harmful to the environment if released in large quantities.

Large Spill: Use extreme caution in handling spilled material. Use spark-proof tools and explosion proof equipment. Do not mix this product with any other chemicals, including any other pool chemicals of any kind, such as other disinfection or "shock" pool products. Contamination with moisture, acids, organic matter, other chemicals (including, but not limited to cleaning chemicals and other pool chemicals), petroleum or paint products or other easily combustible materials may start a chemical reaction with generation of heat, liberation of hazardous gases and possible violent reaction leading to fire or explosion. 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 immediately dissolve material in a water filled container. 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. Prevent entry into sewers, water courses, basements or confined areas. Note. see

Section 1 for emergency contact information and Section 13 for waste disposal.

Small spills: Use extreme caution in handling spilled material. Use spark-proof tools and explosion proof equipment. Do not mix this product with any other chemicals, including any other pool chemicals of any kind, such as other disinfection or "shock" pool products. Contamination with moisture, acids, organic matter, other chemicals (including, but not limited to cleaning chemicals and other pool chemicals), petroleum or paint products or

other easily combustible materials may start chemical reaction with generation of heat, liberation of hazardous gases and possible violent reaction leading to fire or explosion. 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 immediately dissolve material in a water-filled container. 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. Prevent entry into sewers, water courses, basements or confined areas.

Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment

See Section 13 for additional waste treatment information

## 7. HANDLING AND STORAGE

**Handling:** Use extreme caution in handling spilled material. 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. Do not swallow. Do not get in eyes, or on skin or clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container with the lid securely closed. Keep away from heat, sparks, flames, direct sunlight and other sources of heat, including lighted tobacco products. Keep away from combustible material. Add this product only to water. Never add water to this product. Always add the product to large quantities of water. Do not mix this product with any other chemicals, including any other pool chemicals of any kind, such as other disinfection or "shock" pool products. Fire may result if contaminated with acids, organic materials and other easily combustible materials such as oil, kerosene, gasoline, paint products, wood and paper. Use only a clean (new id 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 or pool chemical. Such use may cause violent reaction leading to fire or explosion. Empty containers retain product residue and can be hazardous. 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.

**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. Separate from acids, alkalis, reducing agents and combustibles. See NFPA400, Hazardous Materials Code for further information. Keep container closed. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. If product becomes contaminated or decomposes do not reseal container. If possible isolate container in open air or well-ventilated area. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not contaminate water, food or feed by storage or disposal of this product.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient: calcium hypochlorite

Result	ACGIH	OSHA	Ontario	Mexico	IPEL
TWA	Not established	Not established	Not established	Not Established	1 mg/m <sup>3</sup>
STEL	Not established	Not established	Not established	Not established	2 mg/m <sup>3</sup>

Ingredient: calcium carbonate

TWA	10MG/M3	5mg/m <sup>3</sup> R	Not established	Not established	Not established
	TD	15mg/m <sup>3</sup> TD			
	3MG/M3R	5mg/m <sup>3</sup> R			
		15mg/m <sup>3</sup> R			

Ingredient: calcium dihydroxide

TWA	5mg/m <sup>3</sup>	5mg/m <sup>3</sup> R	5mg/m <sup>3</sup>	5mg/m <sup>3</sup>	Not Established
		15mg/m <sup>3</sup> TO			

ACGIH = American Conference of Governmental Industrial Hygienists

IPEL= International Permissible Exposure Limit  
 OSHA = Occupational Safety & Health Administration  
 TWA – Time Weighted Average  
 STEL = Short term exposure limit values  
 Consult local authorities for acceptable exposure limits.

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 exposure to airborne contaminants below any recommended or statutory limits. Engineering controls maybe required to control the primary or secondary risks associated with this product.

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. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protection

Eyes: Chemical splash goggles and face shield.

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves; nitrile, neoprene, butyl rubber.

Respiratory If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. 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.

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 will be necessary to reduce emissions to acceptable levels.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid. {Granular solid.}
Flash point	Closed cup: Not applicable.
Decomposition temperature :	170 to 180°C (338 to 356°F)
Material supports combustion.	Yes
Color	Various
Odor	Slight Chlorine
pH	alkaline
Boiling/condensation point	Decomposes @ 170-180°C (338-356°F)

Melting/freezing point	Not available
Specific gravity	Not available
Vapor pressure	Not available
Vapor density	Not available
Volatility	0% (w/w)
Evaporation rate	Not available
Viscosity	Not applicable
Solubility	Soluble in cold water
Water Solubility at room temperature	100g/l
Partition coefficient: n-octanol/water	Not available
%Solid. (w/w)	100
Bulk Density.	63-67 lbs/ft <sup>3</sup> (1 -1.07 g/cm <sup>3</sup> )

### 10. STABILITY AND REACTIVITY

Stability: The product may not be stable under certain conditions of storage or use. See "Possibility of Hazardous Reactions" for further information. Product decomposes at approximately 170-180°C (338-356°F) releasing oxygen and some chlorine gas.

Conditions to avoid: Stable under recommended storage and handling conditions (see Section 7). Heating may cause a fire or explosion. Excessive heat will cause decomposition resulting in the release of oxygen and chlorine gas.

Materials to avoid: Highly reactive or incompatible with the following materials: moisture, combustible materials, and organic materials. metals, acids, alkalis, oxidizing materials, reducing materials, Ammonia., Petroleum products., Paint products, wood and paper, pool chemicals. Acid or ammonia contamination will release toxic gases

Hazardous decomposition products: Product slowly releases chlorine gas.

Possibility of hazardous reactions: Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions may include the following: contact with combustible materials  
contact with acids/ammonia

Reactions may Include the following: risk of causing or intensifying fire liberation of toxic gas

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Product/Ingredient name	Result	Species	Dose	Exposure
calcium hypochlorite	LD20 Oral	Rat	850mg/kg	-
	LD50 Dermal	Rabbit	>1000mg/kg	-
sodium chloride	LD50 Oral	Rat	3000/mg/kg	-
calcium carbonate	LD50 Oral	Rat	6450mg/kg	-
calcium dihydroxide	LD50 Oral	Rat	7340 mg/kg	-
calcium chlorate	LD50 Oral	Rat	4.5 g/kg	-

Conclusion/Summary inhaled. Harmful or fatal if swallowed. May be harmful if absorbed through skin. May be harmful if inhaled.

#### Chronic toxicity

Conclusion/Summary Not Available

#### Irritation/Corrosion

Skin Corrosive. Causes burns

Eyes Corrosive. Causes burns

Respiratory Severely irritating to the respiratory system.

**Sensitization**  
 Skin Not available  
 Respiratory Not available  
 Potential chronic health Effects Corrosive to the eyes, skin, respiratory system and digestive tract  
 Target organs Contains material which may cause damage to the following organs: lungs, mucous membranes, gastrointestinal tract, upper respiratory tract. Skin, eye, lens or cornea, stomach.

**Carcinogenicity****Classification**

Product/ingredient name	ACGIH	IARC	NTP	OSHA
calcium hypochlorite	-	3	-	-

Carcinogen Classification code: ACGIH: A1, A2, A3, A4, A5  
 IARC: 1, 2A, 2B, 3, 4  
 NTP: Proven, Possible  
 OSHA: +  
 Not listed or regulated as a carcinogen: -

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
calcium hypochlorite	OECD 471 Bacterial Reverse Mutation Test	Experiment: in vitro Subject: Bacteria	Positive
		Experiment: in vitro Subject: Mammalian Animal	Positive
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: in vivo Subject: Mammalian Animal	Negative

**Conclusion/summary** Mutagenic effects – Equivocal evidence

**12. ECOLOGICAL INFORMATION**

**Environmental effects:** Very toxic to aquatic organisms

**Aquatic Ecotoxicity**

Product/ingredient name	Result	Species	Exposure
Calcium hypochlorite	Acute LC50 67 to 60 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96hours
	Acute LC50 37 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96hours
Sodium chloride	Acute EC50 0.073 to 0.079 ppm Freshwater	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC60 1294600ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	Acute EC50 402600 to 469200 ug/L Freshwater	Daphnia - Water flea - Daphnia magna	48 hours
Calcium dihydroxide	Chronic NEL 0.86 g/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 356 mg/L Marine water	Fish - Guppy - Poecilia reticulata	96 hours
	Chronic NOEC 56 mg/l Marine water	Fish • GUPPY - Poecilia reticulata	96 hours

**Conclusion/Summary** LC<sub>50</sub>:0.088mg/L (96hr, bluegill Sunfish) Very toxic to aquatic life. Do not allow to enter groundwater, surface water or drains.

**13. DISPOSAL CONSIDERATION**

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. 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. If this is not possible, material may be neutralized. Please contact Chemtrec for guidance at 1-800-424-9300. Note: Only property neutralized material should be flushed to sewer. Un-neutralized material can cause environmental damage to receiving water or can interfere

with treatment plant operation. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. Empty containers retain product residue and can be hazardous. Residual material remaining in empty container can react to cause fire. Thoroughly wash empty container with water then destroy by placing in trash collection. 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. 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.

Refer to Sections 7: HANDLING AND STORAGE

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 6. ACCIDENTAL RELEASE MEASURES

#### 14. TRANSPORT INFORMATION

Regulation	UN number	Proper shipping name	Classes	PG*	Additional Information
UN	2880	CALCIUM HYPOCHLORITE, HYDRATED	5.1	II	-
IMDG	2880	CALCIUM HYPOCHLORITE, HYDRATED Marine pollutant (calcium hypochlorite)	5.1	II	-
DOT	2880	CALCIUMHYPOCHLORITE HYDRATED	5.1	II	Reportable Quantity 14.184 lbs./6,4397 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements

\*PG = Packing group

RQ = Reportable quantities

CERLA Hazardous substances: calcium hypochlorite: 10 lbs. (4.54 kg)

#### 15. REGULATORY INFORMATION

United States Inventory (TSCA 8b) : All components are listed or exempted.

Australia Inventory (AICS) : All components are listed or exempted.

Canada Inventory (DSL) : All components are listed or exempted.

China Inventory (IECSC) : All components are listed or exempted.

Europe Inventory (REACH) : Please contact your supplier for information on the inventory status of this material.

Japan Inventory(ENCS) : All components are listed or exempted

Korea Inventory(KECI) : All components are listed or exempted

New Zealand (NZIoC) : All components are listed or exempted

Philippines Inventory (PICCS) : All components are listed or exempted

United States

EPA ID No. • Pesticide. Please contact your supplier to get the information.

SARA 302/304: No products were found.

CERCLA: Hazardous substances.: calcium hypochlorite: 10 lbs. (4.54 kg);

SARA311/312 SDS Distribution. Chemical Inventory· Hazard Identification:

Chemical Name	CAS#	Acute	Chronic	Fire	Reactive	Pressure
calcium hypochlorite	7778-54-3	Y	N	N	Y	N
sodium chloride	7647-14-5	N	N	N	N	N



