

## Calcium Hypochlorite

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Calcium Hypochlorite
<b>Other Means of Identification</b>	Calcium oxychloride, Hypochlorous acid calcium salt
<b>Product Code(s)</b>	CA3010
<b>Product Family</b>	Inorganic Solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0631

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Oxidizing solid - Category 2; Acute toxicity (Oral) - Category 4; Skin corrosion - Category 1; Serious eye damage - Category 1

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

May intensify fire; oxidizer.

Harmful if swallowed.

Causes severe skin burns and eye damage.

#### Precautionary Statement(s):

Keep away from heat.

Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

#### Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

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Immediately call a POISON CENTRE or doctor.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### Other Hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Calcium hypochlorite	7778-54-3	60 - 80	Calcium oxychloride, Hypochlorous acid calcium salt
Sodium chloride	7647-14-5	10 - 30	Halite, Sodium monochloride
Calcium carbonate	471-34-1	1 - 5	Aragonite, Calcium monocarbonate
Calcium hydroxide	1305-62-0	1 - 5	Calcium dihydroxide, Lime hydrate
Calcium chlorate	10137-74-3	0 - 3	Chloric acid calcium salt

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Avoid mouth-to-mouth contact by using a barrier device. Get medical advice or attention if you feel unwell or are concerned.

##### Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

##### Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor. Specific treatment is required.

##### Ingestion

Immediately call a Poison Centre or doctor. Rinse mouth with water. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

##### First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

If on skin: may burn the skin. Permanent scarring may result. If in eyes: may cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

#### Immediate Medical Attention and Special Treatment

##### Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### SECTION 5. FIRE-FIGHTING MEASURES

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## Extinguishing Media

### Suitable Extinguishing Media

Use flooding quantities of water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

### Unsuitable Extinguishing Media

DO NOT use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents). DO NOT use carbon dioxide, or other agents that smother the flames.

## Specific Hazards Arising from the Product

Oxidizer. May intensify fire. Releases oxygen to create an oxygen-rich atmosphere. Will cause combustible materials to ignite more readily. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive chlorine; corrosive hydrogen chloride. Calcium Oxide.

## Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases. Fight fire from a safe distance or a protected location. Oxidizer. Prevent contact with flammable and combustible materials. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal. Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Carefully destroy the hypochlorite by adding hydrogen peroxide (one pint of 35% hydrogen peroxide solution per pound of calcium hypochlorite). Hydrogen peroxide reacts with calcium hypochlorite to form calcium chloride and oxygen gas. Do not close container. Other chemicals, which can be used to break down calcium hypochlorite, are sodium sulfite and sodium bisulfite.

Once the calcium hypochlorite is reduced with either sodium sulfite or sodium bisulfite, the remaining solution should be neutralized cautiously with dilute hydrochloric or sulfuric acid.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Obtain special instructions before use. Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating vapours or mists. Avoid generating dusts. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Prevent accidental contact with flammable and combustible materials. Never add water to a corrosive. Always add corrosives slowly to COLD water. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Keep amount in storage to a minimum. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Not available.

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Consult local authorities for provincial exposure limits. Consult local authorities for state exposure limits.

### Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide eyewash and safety shower if contact or splash hazard exists.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

#### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	White powder.
Odour	Chlorine
Odour Threshold	Not available
pH	10.8 (10% solution)
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	Not available
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not applicable (kinematic); Not applicable (dynamic)
Other Information	
Physical State	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use. Oxidizer. May intensify fire.

### Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

### Possibility of Hazardous Reactions

Decomposes in the presence of water or humidity.

### Conditions to Avoid

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Open flames, sparks, static discharge, heat and other ignition sources. Sunlight. Water, moisture or humidity. Acidic conditions (low pH).

#### Incompatible Materials

Strong acids (e.g. hydrochloric acid), strong reducing agents (e.g. hydrides), alcohols (e.g. ethanol), metals (e.g. aluminum), organic acids (e.g. acetic acid), unsaturated hydrocarbons (e.g. turpentine), ammonia, amines (e.g. triethylamine), aldehydes (e.g. acetaldehyde).

#### Hazardous Decomposition Products

Corrosive chlorine; oxygen (a strong oxidizer); corrosive hydrogen chloride. sodium Oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

#### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

#### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Calcium hypochlorite	Not available	850 mg/kg (rat)	> 2000 mg/kg (rabbit)
Sodium chloride	> 10500 mg/m <sup>3</sup> (rat) (4-hour exposure)	3000 mg/kg (rat)	> 10000 mg/kg (rabbit)
Calcium carbonate		6450 mg/kg (rat)	
Calcium hydroxide	Not available	7340 mg/kg (rat)	Not available

#### Skin Corrosion/Irritation

Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.

#### Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

#### STOT (Specific Target Organ Toxicity) - Single Exposure

##### Inhalation

Causes nose and throat irritation.

##### Ingestion

Harmful

May cause severe irritation or burns to the mouth, throat and stomach.

#### Aspiration Hazard

No information was located.

#### STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

#### Respiratory and/or Skin Sensitization

No information was located.

#### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Calcium hypochlorite	Group 3	Not Listed	Not Listed	
Sodium chloride	Not Listed	Not Listed	Not Listed	Not Listed
Calcium carbonate	Not Listed	Not designated	Not Listed	Not Listed
Calcium hydroxide	Not evaluated	Not designated	Not Listed	
Calcium chlorate	Not Listed	Not designated	Not Listed	Not Listed

Group 3 – Not classifiable as to its carcinogenicity to humans.

#### Reproductive Toxicity

##### Development of Offspring

Conclusions cannot be drawn from the limited studies available.

##### Sexual Function and Fertility

No information was located.

##### Effects on or via Lactation

No information was located.

#### Germ Cell Mutagenicity

No information was located. Conclusions cannot be drawn from the limited studies available.

#### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Bury in a licensed landfill according to federal, provincial/state, and local regulations.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1748	CALCIUM HYPOCHLORITE, DRY with more than 39 per cent available chlorine (8.8 per cent available oxygen)	5.1	II
IATA (Air)	UN1748	Calcium hypochlorite, dry	5.1	II
IMO (Marine)	UN1148	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen), MARINE POLLUTANT	5.1	II
US DOT	UN1748	CALCIUM HYPOCHLORITE, DRY, CORROSIVE or CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)	5.1	II

**Special Precautions** Not applicable

#### Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15. REGULATORY INFORMATION

#### Safety, Health and Environmental Regulations

##### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

##### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

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## SECTION 16. OTHER INFORMATION

**NFPA Rating**            **Health - 3**    **Flammability - 0**    **Instability - 1**

**SDS Prepared By**     Alphachem Limited

**Phone No.**            (905)-821-2995

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**References**            CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer**            This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.